(Buyer-Seller) Relationship Termination

Robert Ping
Wright State University

Follow this and additional works at: https://corescholar.libraries.wright.edu/marketing

Part of the Advertising and Promotion Management Commons, and the Marketing Commons

Repository Citation
https://corescholar.libraries.wright.edu/marketing/40

This Article is brought to you for free and open access by the Marketing at CORE Scholar. It has been accepted for inclusion in Marketing Faculty Publications by an authorized administrator of CORE Scholar. For more information, please contact library-corescholar@wright.edu.
Please note: The entire site is now under construction.

Please send me an email at rping@wright.edu if something isn't working.

FOREWORD AND BACKGROUND--This web site contains substantive (theory testing) research on responses to problems in "business" relationships such as business-to-business buyer-seller relationships, and salesperson-employer relationships. Currently, it contains several of my theory testing papers in this area, and it is intended to help stimulate additional thoughts and research on this topic.

Relationship termination in Sociology and Social Psychology (e.g., in romantic or friendship relationships) has been heavily researched. There, it is believed that relationships go through stages that include creation and growth, and end with dissolution or termination. However, it is well known that there are dissatisfactory relationships that are maintained instead of terminated.

However, comparatively little is known relationship termination about "business-to-business" relationships. For example, in economics it is assumed that dissatisfactory business relationships are simply terminated. However, it is easy to find unsatisfactory business relationships that are not terminated; at least not right away. Sometimes these relationships continue for quite awhile, even indefinitely, just like in marriages.

However, the list of "knowledge gaps" in business-to-business relationship termination, and in the larger venue of responses to relationship problems, is considerable and, in my opinion, interesting.

For example, as far as I know, theoretical research on responses to problems in "business"
relationships such as buyer-seller relationships, and salesperson-employer relationships (what could be termed Hirshman-based models) focuses on "explanation" and possibly prediction of responses to relationship problems such as Loyalty (the beginning of the relationship), Voice (Complaining), relationship Neglect and Exiting. However, anyone with "real world" business experience might say: "OK, but what about relationship repair? Do business ever try to fix important relationships?"

Further, when I do statistical cluster analysis on Exit, Voice, etc. data there are always hints of another cluster of respondents that is somewhere "in between" Voice and Neglect. I suspect these informants are wanting/trying to repair their business relationship. However, I am not aware of any research in the business literature on relationship repair. Several topics in this venue might include antecedents of business relationship repair (i.e., its explanation or prediction), or conceptualizing intervention/repair constructs. (I have spent embarrassingly little time on these matters, but there might be a plausible model of repair with antecedents such as Dissatisfaction, Alternatives, Investment, Switching Costs, Commitment, Social Constraints, Relationship Partner Responsiveness, Self Interest, etc.)

(I recently became aware of John Gottman's work on marriages. While the monograph I saw was in the "pop," rather than academic, literature, Gottman does publish academically, and the title specifically mentioned relationship repair.) (Further, although it is now dated, S. Duck and R. Gilmore's *Personal Relationships Volume 5*, Academic Press, and citations in that monograph might also be useful, especially for conceptualization.) (In addition, there is a robust literature on relationships, and presumably their maintenance and repair, in the international relations literature. However, my brief look at this literature was confusing, perhaps because I found a lack of emphasis on "studies," only what appeared to be opinions and anecdotes. Still, the current interest in Realpolitik (political self-interest and realism, as opposed to ideology, morality, ethics or emotion) and the writings of Hans Morgenthau, for example, might lead to some original relationship repair theory.)

Returning to the cluster analyses mentioned above, while it is also possible that the "outlier" respondents between Voice and Neglect in this cluster analysis are
simply being opportunistic (self-interest seeking with guile), some of these respondents didn't fit an opportunist profile (see the papers below for more on opportunism). There also is considerable confusion about the construct "Loyalty." The problems range from conceptualizing loyalty, to its operationalization in buyer-seller relationships, and they include its maintenance and restoration, and its antecedents. These matters are different, in my opinion, from relationship repair. The maintenance and restoration of relationship Loyalty should occur early in a relationship, whereas relationship repair should occur late in a relationship. Again, Gottman may be a starting point. Further, cluster analysis and respondent scores in my (brief) post hoc analyses suggest that in business, relationship Loyalty is a comparatively "rare bird." However, this may simply be a measurement artifact. Similarly, relationship neglect, and its possible antecedents/covariants including imbalanced relationship power, and attempts at relationship equity restoration ranging from lawsuits to opportunism also are not well understood in my opinion. At the risk of overdoing comments about cluster analysis, "neglecters" are usually the largest cluster in a study. (Again however, this may be a measurement artifact.) In addition, relationship repair could be described as moving away from relationship neglect. What about actually maintaining relationship neglect? As cynical as this may sound, how does one keep business relationship partners from exiting, regardless of how they feel about the relationship? As one colleague put it, "a customer is a customer, no matter how they feel." Please email me with your thoughts, and any and all questions--I would be delighted to discuss these matters further.

Please note: If you have visited this web site before, and the latest "Updated" date (at the top of the page) seems old, you may want to click on your browser's "Refresh" or "Reload" button on the browser toolbar (above) to view the current version of this web page.

All the material on this web site is copyrighted, but you may save it and print it out. My only request is that you please cite any material that is helpful to you using the individual citations for each of the papers shown below.
Don't forget to Refresh: Many of the links on this web page are in Microsoft WORD. If you have viewed one or more of them before, the procedure to view the latest (refreshed) version of them is tedious (The browser's "Refresh" button may not work for Word documents on the web). With my apologies for the tediousness, to refresh any (and all) Word documents in Chrome, for example, please click on the "three dots," then "more Tools," "Clear browsing data," and check "Cashed images and files." After that, close the browser window, then re-launch it so the latest versions of all the WORD documents are forced to download.

Your questions are encouraged; just send an e-mail to rping@wright.edu. Don't worry about being an expert in relationship termination, or using "correct terminology" (or perfect English, for that matter).

A Table of Contents or Index to this website is not available. In the meantime, please consider using your browser's search capability to go to the relevant material. For example, to find material on Relationship Neglect in Chrome, for example, depress "Ctrl" and "f" together, then type the word "neglect" in the search box.

Selected Papers on Relationship Termination...

(PLS. CLICK ON A RED DOT)


  The paper investigates the Hirschman-Rusbult model of responses to relationship problems in a salesperson-employer context.

- "Unexplored Antecedents of Satisfaction in a Marketing Channel" (An earlier version of Ping 2003, *J. of Retailing*, revised December 2006).

  The paper investigates several antecedents of satisfaction from the Hirschman-Rusbult model of responses to relationship problems in a buyer-seller relationship context.


  The paper investigates opportunism in retailers.

- "Taking Another Look at Organizational Commitment" (An earlier version of Ping 2001,
The paper investigates organizational commitment in salespersons.

"Exiting in a Marketing Channel" (An earlier version of Ping 1999, "J. of Retailing, revised December 2006).

The paper investigates Hirschman's sequence of responses to relationship problems that begins with Loyalty and ends with Exiting in retailers.


The paper investigates several antecedents of Voice in a marketing channel context.


The paper investigates several demographic antecedents of Exiting in retailers.


The paper investigates the interaction between Satisfaction and Alternative Attractiveness in their association with Exiting in a marketing channel context.


The paper investigates the Hirschman-Rusbult model of responses to relationship problems in a marketing channel context.

(HOME)
NOTES ON SALESPERSON-EMPLOYER RELATIONSHIPS:
RESPONSES TO RELATIONSHIP PROBLEMS
AND THEIR ANTECEDENTS

Robert Ping
Associate Professor of Marketing
Department of Marketing, 216 Rike Hall
Raj Soin College of Business Administration
Wright State University
Dayton, OH 45435-0001
937-775-3545 rping@wright.edu
NOTES ON SALESPERSON-EMPLOYER RELATIONSHIPS:  
RESPONSES TO RELATIONSHIP PROBLEMS  
AND THEIR ANTECEDENTS

Robert Ping (Ph.D., University of Cincinnati), Associate Professor of Marketing, Raj Soin  
College of Business Administration, Wright State University, Dayton OH, rping@wright.edu.

This research was conducted while the author was on research leave provided by  
Wright State University.
NOTES ON SALESPERSON-EMPLOYER RELATIONSHIPS:
RESPONSES TO RELATIONSHIP PROBLEMS
AND THEIR ANTECEDENTS

Abstract

Responses to problems in committed relationships, those characterized by an implicit or explicit pledge of relationship continuity, have received attention in several literatures outside of personal selling. There it is argued that an offended party will exit the relationship as a last resort. First they are likely to respond with loyalty, remaining silent with confidence that things will get better, or with voice, constructive attempts to change objectionable relationship conditions. Relationship neglect, allowing the relationship to deteriorate, and opportunism, surreptitious self-interest seeking, also have been proposed as responses to relationship problems. Antecedents of these responses include relationship satisfaction, alternative attractiveness, past relationship investment, and the cost to switch relationships.

This research proposes that organizational commitment and goal congruency are uninvestigated antecedents of these responses, that several previous hypotheses are incorrect, and there are uninvestigated linkages among the antecedents. These proposals are explored using salespersons, and the results shed new light on responses such as turnover.
What do salespersons do when they experience problems with their employer, such as territory reduction, commission caps, or being passed over for a promotion? While salespersons' responses to problems with their employer have not been formally studied as far as we know, it is easy to guess what they might do: they might complain, or they might think about working somewhere else.

The situation may be more complex, however. In the economics literature Hirschman (1970) proposed that instead of simply exiting a (committed) relationship, offended parties are likely to either complain first, which he termed voice, or they could be optimistically silent, which he termed loyalty. He described voice as complaining to the relationship partner with the expectation that the problem would be remedied and the relationship would survive. This has been termed positive complaint behavior (see Rusbult, Zembrodt and Gunn 1982) to distinguish it from more negative complaint behavior (e.g., Singh 1990). Later research characterized voice as constructive attempts by the subject to change objectionable relationship conditions; actively seeking problem removal by contacting the relationship partner in a positive, relationship preserving, manner, and cooperatively discussing and working with the relationship partner to improve the situation (see Ping 1993).

Hirschman was equivocal in his discussions of loyalty, alternately characterizing it as either "remaining silent, confident that things will get better" or "not exiting." Since then, Hirschman's loyalty has been generally characterized as "optimistic silence" in the responses-to-relationship-problems literature, but the concept remains somewhat enigmatic (see Goodwin 1991). Researchers typically characterize Hirschman's loyalty as a predisposition to overlook problems because they fix themselves. Problems are viewed as transitory phenomena: they work themselves out or are fixed by others, so the subject ignores them.
Nevertheless, as Ping (1993) pointed out, most marketing literatures, including personal selling, focus on relationship formation and maintenance, and what could be termed motivation within the relationship. These literatures implicitly assume that subjects (eventually) simply exit a dissatisfactory relationship. As a result, they typically pay little attention to other responses to relationship problems besides exiting, or turnover as it is termed in personal selling. However, these and other responses to relationship problems may occur ahead of exit and thus provide, as Hirschman (1970) argued, useful "early warnings." Thus, because of the economic importance of relationship maintenance in personal selling, recognition of these responses and appropriate interventions are or should be important to maintaining employer-salesperson relationships.

In addition to proposing alternatives to exiting, Hirschman also proposed that exit, voice and loyalty had antecedents that included the respondent's overall satisfaction with the relationship, their investment in the relationship, and the attractiveness of alternative relationships. While he had plans to do so (see Hirschman 1970:146), apparently he never tested his proposals.

However, Rusbult and her colleagues, among others, have tested Hirschman's proposals in romantic relationships (e.g., Rusbult, Zembrodt and Gunn 1982; see also Rusbult 1980), and employment relationships (e.g., Farrell and Rusbult 1981, Rusbult and Farrell 1983). Based on multidimensional scaling, she also proposed and tested an additional response to relationship problems in romantic relationships, relationship neglect, which she characterized as passively letting the relationship deteriorate (Rusbult and Zembrodt 1983; see Rusbult, Zembrodt and Gunn 1982). Farrell (1983) also proposed and tested this response to problems in employment relationships (see Rusbult, Farrell, Rogers and Mainous 1988). Relationship neglect involves not caring about the relationship, expending no effort to maintain it, and a willingness to let the relationship deteriorate. Ping (1993) characterized neglect as emotional exiting without physical
exiting. Farrell (1983) stated that employee neglect behaviors included lax and disregardful behaviors, and suggested they included lateness and absenteeism (also see Rusbult, Farrell, Rogers and Mainous 1988).

The Hirschman-Rusbult model of responses to relationship problems has been extended to include opportunism, self interest seeking with guile, that could be viewed as an aggressive-retaliatory response to relationship problems (Ping 1993) (see Rosse and Miller 1984; also see Homans 1974; Walster, Berscheid and Walster 1976). An individual's opportunism occurs within a relationship the opportunist usually wishes to continue. Thus, an opportunist must hide their self-interest maximizing from the relationship partner. It was introduced in the economics literature to explain the "failure of markets," firms choosing to cease external contracting for their inputs or outputs in response to opportunism, and vertically integrating instead to obtain these inputs or outputs (see Williamson 1975). Despite arguments that it should be rare in individuals (e.g., Hill 1990), it has been self-reported in several contexts, including salespersons (see Anderson 1988).

Based on Porter's work on exit barriers (e.g., Porter 1980), among others (Levinger 1979, Johnson 1982), an additional antecedent of the responses to relationship problems was proposed, the cost to switch to an alternative relationship (Ping 1993). The resulting Hirschman-Rusbult-Ping model has been tested in a marketing channel context (see Ping 1993).

The present research extends this model by proposing that goal congruency, the subject's perception that what is beneficial to one party is beneficial to the other, and organizational commitment are antecedents of the responses to relationship problems. Anderson (1988) studied goal congruency in salespersons as an antecedent of opportunism. Goal congruency, the subject and the organization are both working for the same goals and objectives, was introduced in the
agency-theory literature (see Jensen and Meckling 1976). There it is viewed as a desirable organizational trait that should be cultivated because it is a substitute for bureaucratic surveillance (Ouchi 1980). Organizational commitment, identification with and involvement in an organization, has been well studied and it is believed to be an antecedent of exiting or turnover in several literatures (see Brown and Peterson 1993, Mathieu and Zajac 1990).

There are also uninvestigated linkages among the antecedents of responses to relationship problems. Ping (2003) studied some of these linkages, including the direct linkages between satisfaction and alternative attractiveness and investment. The present research proposes that all the antecedents of responses to relationship problems are linked, in some cases in novel ways.

The present research investigates the Hirschman-Rusbult-Ping model with the additional antecedents organizational commitment and goal congruency, and the linkages among the model antecedents, in a salesperson context. Along the way it proposes an alternative theoretical view of employee opportunism in order to generate several novel hypotheses. This research also proposes that several hypotheses in the Hirschman-Rusbult-Ping model have been incorrectly stated in the past. The model-test results include unexpected findings such as the performance of organizational commitment, and overall it is offered as a small step toward further understanding salesperson responses to employment relationship problems.

**LITERATURE**

Hirschman's proposal of other responses to relationship problems besides exiting (Hirschman 1970) and their antecedents, and the research of Rusbult and her colleagues on her extension of Hirschman's model (Rusbult, Zembrodt and Gunn 1983) have generated considerable research in several literatures. For example, when this article was written the Social Science Index listed more than 2000 citations of Hirschman (1970), and more than 150 citations of Rusbult and her
colleagues application of the Hirschman-Rusbult model to employer-employer relations (Rusbult and Farrell 1983) (see Dowding, Mergoupis and Van Vught 2000; Hagedoorn, Van Yperen, Van de Vliert and Buunk 1999; and Goodwin 1991 for summaries). Within Marketing, Ping's extension of the Hirschman-Rusbult model (Ping 1993) was cited more than 30 times.

Literature directly or indirectly related to the model is summarized in Bansal, Taylor and James (2005); De Wulf and Odink and Schroder (2001); Ping (1993), and Ping (2003). For example, the Hirschman-Rusbult model (Rusbult, Zembrodt and Gunn 1983) was proposed and tested in two steps. Rusbult (1980) proposed what she termed an investment model that contained satisfaction, alternatives, investment and exiting. Similar proposals have been made by other authors (e.g., Johnson 1982; Ko, Price and Mueller 1997; Brown and Peterson 1993).

Several of the responses to relationship problems and their antecedents have been studied individually, some of them in personal selling. Exiting or turnover has been extensively studied in many literatures including personal selling (e.g., Bansal, Taylor and James 2005; see Brown and Peterson 1993 for a summary). However, voice and opportunism have received comparatively less attention in Marketing (see Ping 1997 for a summary of voice research, and Jap and Anderson 2003 for a summary of opportunism). The investment model antecedents, satisfaction, alternatives and investment, have been extensively studied (see Geyskins, Steenkamp and Kumar 1999; Le and Agnew 2003), and these antecedents have received considerable attention in personal selling (see Brown and Peterson 1993 for summaries). Switching costs have also received attention (Ping 1993; Lam, Shankar, Erramilli and Murthy 2004; Burnham, Frels and Mahajan 2003; Jones, Mothersbaugh and Betty 2002). However, Hirschman's loyalty as a response to relationship problems, and Rusbult's neglect have received comparatively little attention in Marketing. (Customer) loyalty, for example is typically
conceptualized in Marketing as simply not exiting, with little or no consideration of relationship problems (see for example the citations in Bell, Auh and Smalley 2005).

In addition to those with exiting or turnover, most of the linkages in the Hirschman-Rusbult-Ping model have been observed (e.g., Sinclair and Fehr 2005; Sverke and Goslinga 2003; Maitland 1995; Derlega, Winstead, Lewis and Maddux 1993; Goodwin 1991; Singh 1990; Whitney and Cooper 1989; Lyons and Lowery 1989; Anderson 1988; and Farrell and Rusbult 1981; Ping 1993, 1999; Rusbult 1980; Rusbult, Zembrodt and Gunn 1982; Rusbult and Farrell 1983; Rusbult and Zembrodt 1983; Rusbult, Johnson and Morrow 1986; Rusbult, Farrell, Rogers and Mainous 1988). However, the results have been mixed for several responses (see Table 3). While other explanations are plausible, some of the hypothesized associations appear to be sensitive to differences in study context. For example, relationship neglect and alternative attractiveness have been unassociated, or negatively or positively associated, depending on context. Thus, an objective of the present research is to test the Hirschman-Rusbult-Ping model in the salesperson context.

RESPONSES TO RELATIONSHIP PROBLEMS IN SALESPERSON-EMPLOYER RELATIONSHIPS

We will argue the antecedents of the responses to relationship problems satisfaction, organizational commitment, goal congruency, alternative attractiveness, past relationship investments, and switching costs are associated with the responses, loyalty, voice, opportunism, neglect and exiting. We will then argue the antecedents are themselves linked to each other.

Beginning with the responses to relationship problems, authors have argued that relationship satisfaction should be positively associated with responses to relationship problems that are relationship positive: loyalty, the subject remaining silent with confidence that things will get better, and voice, constructive attempts by the subject to change objectionable relationship
conditions. Specifically, as relationship satisfaction increases and the relationship becomes more valuable (Thibaut and Kelly 1959) relationship "positive" responses to relationship problems, those that do no harm to the relationship, should be likely (see Hirschman 1970, Rosse and Hulin 1985, Rusbult and her colleagues, Ping 1993). Similarly, as relationship satisfaction increases and the relationship becomes more valuable, relationship "negative" responses to relationship problems, those that allow or cause harm to the relationship should be less likely. Thus, satisfaction should be negatively associated with relationship neglect, allowing the relationship to deteriorate (Ping 1983, Rosse and Hulin 1985, Rusbult and her colleagues); opportunism, surreptitious self-interest seeking at the expense of the relationship partner (Anderson 1988, Pfeffer and Salancik 1978, Ping 1983; and exiting (see the citations in Brown and Peterson 1993, Hirschman 1970, Rusbult and her colleagues, Ping 1993).

Formally,

H1a: satisfaction is positively associated with loyalty, voice and organizational commitment, and negatively associated with opportunism and neglect.

Similarly, attributes of a satisfactory relationship, including goal congruency and organizational commitment, should also be associated with responses to relationship problems. Specifically because goal congruency and organizational commitment also make a relationship perceptually more valuable, they should be positively associated with responses to relationship problems that do no harm to the relationship, loyalty and voice. Similarly, as goal congruency and organizational commitment increase and the relationship becomes more valuable, responses to relationship problems that allow or cause harm to the relationship should be less likely. Thus, goal congruency and organizational commitment should be negatively associated with relationship neglect, opportunism, and exiting (also see the citations in Brown and Peterson 1993).
Satisfaction has been observed to be negatively associated with exiting when organizational commitment is not measured (e.g., Netemeyer, Johnson and Burton 1990). However, based on Williams and Hazer’s 1986 and other studies (e.g., Davy, Kinicki and Scheck 1991, see Brown and Peterson 1993 and Mathieu and Zajac 1990 for summaries) the satisfaction-exiting association should be mediated by organizational commitment (however, see Sager 1994, and Curry, Wakefield, Price and Mueller 1986--as Brooke, Russell and Price (1988) suggested, the link between these two variables may be more complex than previous thought and empirical research have suggested). Specifically, satisfaction should increase organizational commitment, which then decreases exiting. The relationship is similar to clouds creating rain in order to create puddles, but clouds not necessarily directly creating puddles. Thus, we should withdraw the prediction that there is a direct link between satisfaction and exiting, and hypothesize instead that satisfaction is positively associated with organizational commitment, which in turn is negatively associated with exiting. Thus, satisfaction should not be directly associated with exiting when organizational commitment is measured. This is consistent with Rosse and Miller’s (1984) arguments that dissatisfied employees first withdraw emotionally before they withdraw physically.

In summary,

H1b: goal congruency and organizational commitment are positively associated with loyalty and voice, and negatively associated with opportunism, exiting and neglect.

Previous studies have hypothesized that alternative attractiveness should be negatively associated with loyalty and neglect, and positively associated with voice, opportunism and exit. As the attractiveness of alternatives increases and the subject becomes less likely to be passive when there are relationship problems (Ping 1993), they subject should be more inclined to be vocal (Rusbult and her colleagues, Ping 1993), "even the score up a bit" (opportunism) (Ping
However, we disagree with previous arguments that alternative attractiveness should be positively associated with voice. For example, Rusbult, Farrell, Rogers and Mainous 1988 and others have argued that subjects are likely to be active rather than passive in their responses to relationship problems when there are alternatives, and they should be vocal. Nevertheless, that alternatives to the present relationship should decrease the likelihood of voice was one of the reasons for Hirschman's monograph (see Hirschman 1970:44). He argued that, other things being equal, one is likely to be vocal when there are few alternatives to the present relationship, not when there are more. Thus, we propose that alternative attractiveness should be negatively associated with voice.

Thus,

H2: alternative attractiveness is negatively associated with voice, loyalty and neglect, and positively associated with opportunism and exiting.

Previous research has also argued that relationship investment and switching cost should be positively associated with the positive responses to relationship problems (loyalty and voice) and negatively associated with the negative responses (relationship neglect, opportunism and exit). When sunk costs such as relationship investments, or future costs, switching costs, are high, subjects should prefer positive responses to relationship problems that safeguard or avoid these costs (Hirschman 1970, Rusbult and her colleagues, Ping 1993), and they should avoid negative responses that risk losing or incurring these costs (see the citations in Brown and Peterson 1993, Rusbult and her colleagues, and Ping 1993).
However, we disagree that opportunism should be negatively associated with investment and switching cost (e.g., Ping 1993). Opportunism at the level of an individual could plausibly be viewed as an equity restoring behavior (see Walster, Berscheid and Walster 1976). Equity as it is used here, has been characterized as "keeping score" of partner's rewards and costs in a relationship, relative to the subject's rewards and costs. Equity has been heavily researched, and the evidence suggests that in high quality relationships partners do not "keep score." However, in lower quality relationships one or both relationship partners should be acutely aware of any imbalance of relationship rewards and costs. There, opportunism might unilaterally reduce the opportunist's relationship cost, and increase their rewards, and/or increase partner's relationship cost and/or decrease their rewards. While there is always a risk of discovery, if this risk is low enough or far enough in the future, an opportunistic salesperson, for example, could falsify call reports (a cost reduction for the salesperson) or inflate expense reports (an increased reward to the salesperson with an increased cost to the employer) to "even the score up a bit" (improve equity). Thus, we hypothesize that past relationship investment and the cost to switch relationships should increase equity restoring activities such as opportunism.

Formally,

H3: investment and switching cost are positively associated with opportunism, loyalty and voice, and negatively associated with exit and neglect.

Turning to the linkages among the antecedents of responses to relationship problems, agency theory predicts that principals (e.g., firms) and their agents (e.g., employees) should have divergent goals (e.g., the firm maximizes its profit while employees maximize their profit) (see Eisenhardt 1985, Leibenstein 1982). To the extent the organization=s goals and objectives approximate those of the individual (goal congruency) the individual should be attracted to the organization (Byrne 1969). Over time, sharing similar goals and objectives should be rewarding
to the individual. These rewards should increase the subject's satisfaction and strengthen their identification with the organization, and thus increase an individual's efforts to maintain and build the relationship (Ouchi 1980), which captures Mowday, Steers and Porter=’s (1979) definition of the concept of organizational commitment (p. 226). Thus,

H4: goal congruency is positively associated with satisfaction and organizational commitment.

Using several theoretical arguments, Johnson and Rusbult (1989) proposed that relationship satisfaction should reduce the attractiveness of alternatives. Because the subject's comparison level for alternatives (CLalt) with respect to satisfaction should have been increased in a satisfactory relationship (Thibaut and Kelly 1959), the satisfaction available in alternative relationships should appear less attractive in comparison. Using similar logic, attributes of a satisfactory relationship such as goal congruency should raise the subject's CLalt for goal congruency, and the goal congruency available in alternative relationships should also appear less attractive. Similarly, using other authors' logical arguments (see Scanzioni 1979) Dwyer, Schurr and Oh (1987) proposed that in committed relationships alternative relationships should be less attractive. Johnson and Rusbult (1989) also concluded that greater commitment was associated with what they termed alternative devaluation. Thus,

H5: satisfaction, organizational commitment and goal congruency are positively associated with alternative unattractiveness.

Similarly, a satisfactory relationship should perceptually magnify the cost to switch relationships. Johnson (1982) implied that exiting obtains when cost to stay exceeds the cost to leave. This hints that when satisfaction is high switching costs may be perceived as high. Rusbult (1980, p. 174) stated that as satisfaction increases, relationship costs should decrease. Using comparison level logic (Thibaut and Kelly 1959), because a subject's CLalt for costs in their
satisfactory relationship should be low (e.g., Walster et al. 1976), the additional costs to switch relationships should appear unattractive in comparison (e.g., Ping 1990). Depth interviews with a convenient sample of salespersons suggested no one voluntarily would incur these unnecessary costs if they are satisfied with their present employer. Using dissonance logic (Festinger 1957), switching costs that are unnecessary and unattractive are likely to be evaluated as perceptually high, rather than perceptually low.

Thus, the costs to switch from a satisfactory relationship should appear unattractive (Ping 1990), and satisfaction and switching cost should be positively associated.

Using similar logic, the attributes of satisfactory relationships, including goal congruency and organizational commitment, should lower the subject's CLalt for costs, and switching costs should also appear less attractive and thus likely to be judged as high. Thus, the attributes of a satisfactory relationship, including goal congruency and organizational commitment, should be positively associated with switching cost.

In summary,

H6: satisfaction, organizational commitment and goal congruency are positively associated with switching cost.

Using consistency arguments (Festinger 1957), Ping (2003) argued that past investments in a relationship should be likely to increase the subject's satisfaction with their relationship. Subjects tend to alter their feelings to be consistent with their past actions (Festinger 1957), in this case past investments. Since subjects are likely to seek satisfaction rather than dissatisfaction (Homans 1961), increased investments should be likely to increase satisfaction (rather than dissatisfaction). This effect should also extend to other feelings in a satisfactory relationship, such as goal congruency and organizational commitment. Thus,

H7: investment should be positively associated with satisfaction, organizational
commitment, and goal congruency.

Ping (2003) argued that investments also increase alternative unattractiveness and switching cost. Investment should be a combination of those investments that are transferable to another relationship and those that are not. Investments that are nontransferable to alternative relationships should increase the unattractiveness of these alternatives and the cost to switch to these alternatives because subjects should not want to lose them and be forced to incur the costs in time, money and effort to replace them. In turn, the magnitude of the time, money and effort to replace the nontransferable switching costs should increase the unattractiveness of alternative relationships (Porter 1980). Thus investment increases alternative unattractiveness and switching costs, and switching costs increase alternative unattractiveness.

In summary,

H8: investment should be positively associated with alternative unattractiveness and switching cost; and
H9: switching cost should be positively associated with alternative unattractiveness.

Previous studies lend empirical support to some of these proposals (see Table 3), and the proposals are summarized in Figure 1.

A TEST OF THE PROPOSED MODEL USING SALESPERSONS

The Figure 1 model was tested using a mailed-out survey of salespersons.

Sampling The study population was U.S. salespersons who represented a single firm that also employed them--it excluded independent agents and brokers. The sampling frame was the subscription list of a major personal selling publication, and the sample was selected using n-th name selections of 100 pretest salesperson names and addresses, then 900 final-test salesperson names and addresses.

Pretesting The final-test mailing was preceded by several scenario analyses that were used to
preliminarily evaluate the measures. These were followed by the pretest mailing used to gauge the response rate, and to further assess the psychometric properties of the measures. While the study measures were judged sufficiently reliable and valid for the final test mailing, minor changes were made to the cover letter, and the questionnaire instructions and format.

**Final Test** Two hundred seventy eight usable responses resulted from the final-test mailing, a 31% usable response rate. Based on a comparison of the demographics of the responses and published salespersons' demographics, the responses were judged to be representative of the study population.

**Measures** The study concepts were measured used existing scales or adaptations or existing scales. The conceptual and operational definitions of these measures are shown in Table 1. For example, satisfaction was conceptualized as the subject's global evaluation of relationship fulfillment (see Brown and Peterson 1993). The conceptual domain of satisfaction was the overall evaluation of the relationship; an appraisal of the relationship attributes that are rewarding, profitable or instrumental. Its operational definition was the belief that the relationship is satisfactory, and items included, "All in all, my relationship with my company is very satisfactory." Satisfaction was initially measured using two scales, one developed by Bagozzi (1980), and one adapted from a measure developed by Ping (1993). Based on their scenario analysis, pre- and final-test performances, the second measure was chosen to estimate the Figure 1 structural model.

Exiting was operationalized as exit propensity, the disinclination to continue the current relationship, and it was initially measured using two scales, one developed by Bluedorn (1982), and another adapted from a measure developed by Ping (1993). Based on the scenario analysis and pretest results the second measure was selected for use in the final test.
Goal congruency and opportunism were measured using scales developed by Anderson (1988), and the measures for alternative attractiveness, switching cost and voice, were adapted from measures developed by Ping (1993).

Organizational commitment was measured using a scale developed by Mowday, Steers and Porter (1979). However, it was multidimensional. The measures for loyalty, investment, and neglect, which were adapted from measures developed by Ping (1993), and the opportunism measure, were also multidimensional. For these multidimensional measures the Factor 1 items of each scale were used instead of the full measure.

Reliability and Validity  After minimal item weeding to attain internal consistency, the measures were judged to be internally and externally consistent. The reliabilities of the study variables were above .85, which suggested they were reliable (see Table 2). Example items for these measures are shown in Table 1.

Each measure was judged to be content or face valid, and each latent variable was correlated with other latent variables in theoretically plausible directions (see Table 2), which suggested their construct validity. With one exception, each measure had an Average Variance Extracted (AVE, the percentage of variance not due to measurement error) (see Fornell and Larker 1981) above 0.5, which suggested their convergent validity (see Table 2). With the same exception, each measure's squared correlation, or percentage covariance, with each of the other study variables was less than their error-free variance percentages, AVE's, of both variables involved in the correlation, which suggested their discriminant validity (i.e., they were empirically distinct from one another) (see Fornell and Larker 1981).

Organizational commitment (OC), however, was not convergent or discriminant valid, and it produced estimation difficulties in the Figure 1 structural model. Its percentage error-free
variance, AVE, was less than 0.5 (0.47) suggesting it was composed primarily of error variance, and thus not convergent valid. In addition, its percentage covariance, its squared correlation, with at least two other study variables, satisfaction and goal congruency, was greater than the percentage error-free variance, AVE's, of both variables involved in the correlation, suggesting it was empirically indistinct from these variables—all its error-free variance was involved in covariance. Thus, because OC was composed of more than 50% error variance and it was empirically identical to several other study variables, retaining OC in the Figure 1 model was judged to be inappropriate on validity grounds.

Measurement and Structural Models Nevertheless, two Figure 1 models were estimated using LISREL 8 and maximum likelihood estimation. Specifically, the revised measurement and structural models for Figure 1, without Organizational Commitment, were estimated and judged to fit the data (see Tables 4 and 5). And, because of organizational commitment's prominence in the selling and employment literatures, the Figure 1 model was also estimated with organizational commitment.

However, lack of discriminant validity usually produces subtle, to obvious, estimation difficulties because of the higher correlations between one or more latent variables that frequently attends discriminant invalidity. Estimating the Figure 1 structural model with organizational commitment initially produced standardized structural coefficients for organizational commitment that were greater than 1 in absolute value (|1|) (see Table 6), probably because of its near-collinearity with several variables (see Table 2). Standardized structural coefficients are related to correlations and should be less than or equal to |1| (see Blalock 1979), suggesting the initial estimates were improper. However, in this case the standardized structural coefficients greater than |1| could be "remedied" by correlating the
structural disturbances (ζ's) among the responses to relationship problems and re-estimating (see Table 7).

**Results** The results of estimating these two models, the (remedied) Figure 1 model with Organizational Commitment (the OC model), and the Figure 1 model without organizational commitment (the non-OC model), are shown in Tables 7, 4 and 5, and they are summarized in Table 3. The hypotheses were generally supported by both these estimations. Specifically, each of the responses to employer problems was significantly associated with one or more proposed antecedents. In addition, each of the proposed antecedents was associated with one or more responses to relationship problems, and one or more of their hypothesized antecedents. The explained variances (R²) ranged from low to comparatively high. The explained variances for opportunism and exit, for example, were comparatively high (59% and 69-70% respectively), but the explained variances of voice, neglect and loyalty were lower (21-24%, 35-40% and 4-8% respectively) (see Table 4).

**DISCUSSION**

**RESPONSES TO RELATIONSHIP PROBLEMS**

Several of the observed direct associations were significant, but their total associations (direct plus indirect associations) were not, and vice versa. For example, investment's (INV) direct association with neglect (NEG) was not significant (see Table 3), while its total association, or total effect, was significant (see Table 8). Because these total effects reflect, for example, INV's effect on NEG via all the model paths between INV and NEG--the INV --> NEG path, plus the indirect INV --> satisfaction --> NEG path, plus the indirect INV --> alternatives (ALT) --> NEG path, plus the indirect INV --> switching cost --> NEG path--we will interpret the Table 8 total effects.
The Figure 1 model with Organizational Commitment (OC), the OC model, and the Figure 1 model without organizational commitment, the non-OC model, were interpretationally equivalent in most cases; their structural coefficients agreed in significance and, for significant structural coefficients, in sign, except for the ALT-voice association, and the ALT-opportunism and ALT-neglect associations. Nevertheless, we primarily will rely on the non-OC model estimates for interpretation, for the reasons previously mentioned: OC failed to be convergent and discriminant valid, and its structural model required remediation with correlated structural disturbances to remove its infeasible standardized structural coefficients greater than 1 in absolute value. However, we will return to the OC model later.

Discouraging Turnover

In the study, turnover (exiting) was likely to be discouraged by alternative unattractiveness, investments, switching costs, goal congruency, organizational commitment, and indirectly by satisfaction. These results support the well-worn prescription in sales management to increase salespersons’ satisfaction in order to reduce the likelihood of turnover. However, increased relationship-specific investment, from, for example, more product training, and increased switching cost, with, for example, improved medical or dental insurance, were also likely to play a (lesser) role in discouraging turnover in the study.

The significant satisfaction, investments and switching costs associations with alternatives suggested that alternative attractiveness was reduced by increased satisfaction, investments and switching costs, which in turn were likely to reduce turnover in the study. However, alternative attractiveness was positively correlated with exiting (see Table 2), so directly reducing alternative attractiveness instead of relying on satisfaction, investment or switching cost to reduce it may have directly reduced the likelihood of turnover in the study. This might have been accomplished
using, for example, "success stories" of clients who switched from the competition.

However, based on the magnitude of their (standardized) total effects, satisfaction and organizational commitment, followed by goal congruency were most important in discouraging turnover (see Table 8). Alternatives and switching costs were a distant second, followed by investment. Thus, busy sales managers in the study should probably have attended first to satisfaction and goal congruency in their sales force. Once these were progressing satisfactorily, increasing switching costs and possibly alternative unattractiveness should have been next, and increasing sales force investments should have been last.

For emphasis, unattractive alternatives, investments and switching costs were (somewhat) likely to discourage turnover in the study. This was one of the arguments that Allen and Meyer 1990, among others (see Levinger 1979), made regarding relationship commitment: individuals stay in (appear to be committed to) a relationship either because they want to (i.e., relationship quality is high) or because they have to (e.g., the alternatives are not attractive, etc.). In this case salespersons were more likely to stay in their relationship because they wanted to, than because they had to.

However, this was true only for salespersons with levels of satisfaction and alternative attractiveness that were at the study average. Ping (1994) proposed there was an interaction between satisfaction and alternative attractiveness in their association with exiting. This was also true in the present study. As a result, as satisfaction declined the magnitude of the (positive) effect of alternative attractiveness on exiting became larger. Eventually, salespersons who had levels of satisfaction below the study average were likely to stay in their relationship because they had to--the effect of alternative attractiveness on exiting (its structural coefficient) for these salespersons was now larger than either the satisfaction or goal congruency effect. As a result, for
low satisfaction salespersons in the study direct alternative attractiveness reduction efforts by sales managers may have been more likely to be efficacious than their satisfaction or goal congruency management.

In a re-estimation of the model containing organizational commitment with the satisfaction-to-exiting path free, the direct path between satisfaction and exiting was non significant (β = -0.193, t = -1.93). While this association might have been significant with a larger sample, its comparatively small structural coefficient is consistent with other satisfaction-organizational commitment-exiting studies, and such results add to the evidence that there may be minimal or no direct relationship between satisfaction and exiting in the presence of organizational commitment in employee relations. However, in the present study this result should be considered provisional--organizational commitment was empirically indistinct from both satisfaction and exiting. Nevertheless, for emphasis, in the model containing organizational commitment, satisfaction was significantly but indirectly associated with exiting, and it was the "driver" of non-exiting for salespersons with average or above average levels of satisfaction.

We shall return to managing turnover later under Increasing Satisfaction.

Avoiding Employment-Relationship Neglect

As previously discussed, there appears to be a response to relationship problems where the subject withdraws emotionally from the relationship (Ping 1993) without physically exiting, relationship neglect. It was conceptualized in the present study as not caring about the relationship, expending no effort to maintain it, planning to do nothing to improve relationship conditions, and willingness to let the relationship die. While exiting and opportunism have been studied at least once in a personal selling context, neglect is unstudied in this context as far as we know.
Neglect was negatively correlated with voice in the study, which suggested salespersons who are neglecting the relationship are not likely to be vocal (complain). Neglect was comparatively rare in the study. About 7% of the sample did not disagree they were neglecting the relationship, and in focus groups conducted before the study neglect seemed to be a pessimistic silence about the likelihood of things getting better, as opposed to loyalty's optimistic silence.

In these focus groups, there may have been two types of neglect: one that attends exiting—mentally "moving on" to the alternative relationship as part of the exiting process. And, there may have been another type of neglect that was emitted by dissatisfied salespersons who did not want to exit, possibly because of structural constraints (Ping 1993) such as the alternative required relocating the family against their will. This was also suggested in the study. Neglect was positively correlated with exiting (see Table 2), and among salespersons who did not disagree they were neglecting the relationship, 66.7% agreed or strongly agreed they intended to exit the relationship.

However, 33.3% of salespersons in the sample who did not disagree they were neglecting the relationship also did not agree they intended to exit. The focus groups results hinted that among those who were neglecting their relationship but did not intend to exit, structural constraints may have been perceived as high. Indeed in the study for salespersons who did not disagree they were neglecting the relationship but did not agree they intended to exit, 66.7% agreed or strongly agreed switching cost was high.

These results support Rosse and Hulin's (1985) assertions that subjects first emotionally withdraw from a dissatisfactory committed relationship. However, these results suggest that exiting may be a separate matter, at least for some--33.3% of salespersons who did not disagree they were neglecting the relationship were neutral or disagreed they were exiting.
This had management implications in the study. While as a percentage of the sample neglect was comparatively rare, it attended exiting for most of those in neglect. Stated differently, neglect, lax behaviors such as lateness and absenteeism, and disregardful behavior such as avoidance and lack of contact, was for most salespersons in the study an indicator of those who were exiting. Parenthetically, salesperson silence might also have suggested relationship neglect for those salespersons who have been with the organization long enough to perceive they have a large investment in the relationship--14.8% of the sample were loyal and also silent.

The significant alternatives-neglect (total) association was in an unexpected direction in the study. Specifically, while its effect was minor when compared to satisfaction and goal congruency, neglect was increased by alternative attractiveness instead of decreased as hypothesized. However, this association has been observed to be variously nonsignificant (Rusbult, et al. 1988), positive (Ping 1993) or negative (Rusbult, et al. 1982) in previous studies, suggesting it may be sensitive to study context. Specifically, recalling the interviews where neglect may have attended "moving on," these results suggest that salespersons in the study who were neglecting their relationship may have been mentally "moving on" to an alternative relationship and neglecting the relationship as part of their exiting process. Indeed, for salespersons who did not disagree they were neglecting their relationship, 77.8% agreed the alternatives were attractive. More important, the positive alternatives-neglect (total) association suggested these salespersons might not have been concerned about appearances and the attendant possibility of organizational retaliation as they exited.

For emphasis, it was not the case that structural constraints had little affect on neglect in the study. Based on the relative magnitudes of their structural coefficients, dissatisfaction and lack of goal congruency precipitated neglect. However, given relationship neglect (neglect > 3), 77.8%
of the sample viewed alternatives as attractive, and in a re-estimation of the non organizational commitment model restricted to salespersons in relationship neglect, alternatives were only the "driver" of neglect (standardized beta = 0.823, t-value = 2.33)--the other antecedents were non-significant. Parenthetically, this effect was so strong that it showed up in the full sample. Thus, given relationship neglect, alternative attractiveness was likely to have aggravated it.

As an aside, while investment decreased neglect in the full sample and switching cost had no effect on neglect, given relationship neglect, 88.9% of the sample did not disagree their relationship investment as high (investment ≥ 3), and 66.7% viewed switching cost as high (switching cost ≥ 3), suggesting these may have slowed exiting.

Fortunately, satisfaction and goal congruency had the major attenuating effects on neglect (see Table 8). Thus, primary activities aimed at managing exiting in the study were also likely to have managed neglect in the study.

We will discuss the positive correlation between neglect and opportunism (see Table 2), a relationship equity restoring behavior, later.

*Cultivating Voice*

As previously discussed, voice is positive complaining by those who are willing to cooperatively work to improve the situation. Voice alerts an organization to its errors of omission and commission (Hirschman 1970), and it should be negatively associated with exiting (Hirschman 1970; see Table 2). Thus, it may be desirable to cultivate voice in salespersons.

In the present study voice was likely to be increased by relationship investment, goal congruency and unattractive alternatives (see Table 8). Of these, the primary drivers of voice were goal congruence and investment.

Alternative attractiveness was negatively associated with voice as Hirschman (1970)
predicted. However, in other studies this association has been observed to be either nonsignificant (Ping 1993, Rusbult et al. 1982) or positive (Rusbult et al. 1988). While other explanations are plausible, the varied alternative attractiveness-voice associations across studies suggest this association may depend on context. Specifically, there may be an interaction in the alternatives-voice association. An interaction can produce a positive association in one study, a non-significant association in another, and a negative association in a third study. This result will become clearer later.

Probing the possibility of an interaction with alternatives, we found that satisfaction and alternatives interacted in their association with voice. The effect of this interaction was that, as the level of overall satisfaction varied across subjects in the sample, for subjects with low overall satisfaction alternatives were positively associated with voice. However, for subjects with overall satisfaction near or above the study average alternatives were negatively associated with voice.

In studies where this interaction was not specified the observed alternatives-voice association would be approximately the association at the study average of satisfaction (see Aiken and West 1997). Thus, in studies where this association has been nonsignificant (Ping 1993, Rusbult et al. 1982), the study average of overall satisfaction may have been low. This is suggested by the subjects with low overall satisfaction in the present where alternatives were positively associated with voice. In another study where the association was positive (Rusbult et al. 1988), the study average of overall satisfaction may have been higher than the present study. This is suggested by the subjects with higher overall satisfaction in the present where alternatives were negatively associated with voice.

We speculate that in the present salesperson context when overall satisfaction was comparatively high, attractive alternatives may have made it easier to ignore relationship
problems, thus reducing voice. In that case, one could always change selling organizations if things were not fixed.

For emphasis, Hirschman (1970) predicted that subjects would become more vocal when there were few alternatives to the present relationship. Based on the interaction, this may have applied only to satisfied subjects in the study. However, Hirschman's discussions of voice suggest his prediction may have assumed satisfied subjects as well. His "voice" was emitted by subjects willing to cooperatively work to improve the situation. In different terms, they expected repair. However, Rusbult's predictions that alternative attractiveness should increase voice may have assumed less satisfied subjects, although this was not apparent in their discussions of voice. In the consumer literature, Singh (1990) observed several voice "styles" ranging from passive, to "irate" and "activist," and this may have reflected varying levels of overall satisfaction and alternatives.

Thus, assuming there are always at least minor employment problems in selling organizations, and recalling that increasing voice is desirable because it alerts management to organizational lapses, increasing goal congruency (see the discussion of this topic under Increasing Satisfaction below), and to a lesser extent increasing relationship investment, with for example more product training may have been efficacious the study. In addition, assuming a high satisfaction salesforce, increasing alternative unattractiveness, with for example a newsletter containing success stories of customers who made the switch from a competitor, might have been employed to increase voice.

Fornell and Wernerfelt (1987) suggested directly influencing voice in consumers using 800 numbers and quick and competent complaint processing. Variations on this theme for employees such as cell phone calls, which are difficult to trace, to an 800 number that simply records
messages, suggestion boxes, or a managerial "open door" policy for complaints might also have increased voice in the study. Sales managers may also have wished to publicize to their salespersons successful outcomes proceeding from other salespersons' use of voice. They may also have actively solicited salesperson voice by asking for their "number one complaint" in sales meetings or in private. They may also have considered using salesperson satisfaction surveys to facilitate voice.

*The Enigma of Relationship Loyalty*

As previously discussed, Hirschman's loyalty, remaining silent, confident that things will get better, has been characterized as a predisposition to overlook relationship problems because they fix themselves. These loyal subjects view problems as transitory phenomena; problems work themselves out or are fixed by others, so they ignore them. In the study, loyalty was positively associated with satisfaction and switching costs. However, the variance in loyalty explained by these variables was low. Rusbult et al. (1988) also observed low explained variance in loyalty ($R^2 = 0.123$). Thus, in this context Hirschman's loyalty remains enigmatic (Goodwill 1991) because its antecedents or drivers, "causes," are not accounted-for by the proposed model. Stated differently, the proposed model does not convincingly suggest how loyalty is "created" or maintained in this context.

However, Hirschman (1970) argued that (relationship) loyal subjects should first attempt voice, and they should exit only if that fails to improve matters. Indeed, freeing the loyalty-to-voice path in the non-organizational commitment model suggested it was significant (standardized beta$_{loyalty to voice} = -0.451$, t-value $= -7.67$), however the direction of this path could not be determined.$^{12}$ Nevertheless, Hirschman's argument hints that subjects might begin a (committed) relationship with loyalty. Indeed, while there was no overall relationship between
loyalty and the number of years the subject had been with their present company, tenure was significantly associated with loyalty among subjects with 2 or fewer years with their present company (standardized beta years to loyalty = -0.384, t-value = -2.14). Thus, study subjects may have begun their relationship as loyal, but were likely to become vocal after about 2 years. Stated differently, relationship loyalty may have been a dispositional response to relationship problems in the study attendant to being newly committed to the relationship.

Parenthetically, we probed loyal subjects to determine their "profile" using their average satisfaction, and their perceived alternative attractiveness, investment, and switching costs. Salespersons reporting higher loyalty (loyalty greater than 3) also reported above average satisfaction, alternative unattractiveness, investment, and switching costs. In addition, because the study subjects may have been loyal for only the first few years, their percentage of the sample was comparatively small (7%).

Bearing in mind that relationship loyal salespersons may be a small segment, and based on Hirschman's (1970) and others arguments in effect that efforts to increase loyalty may also decrease the positive aspects of voice, sales managers interested in preserving loyal behavior in the study may have maintained high satisfaction and the perception of high switching costs among those who have recently joined the organization within the last few years.

Holding Opportunism at Bay

Opportunism, surreptitious self-interest seeking, is not new to the personal selling literature. Anderson (1988) investigated it and found the primary influence on opportunism in salespersons was goal congruency. This was also true in the present study. However, unattractive alternatives also decreased opportunism, and the investment-opportunism direct effect was significant and its total effect approached significance, suggesting that in a larger study it might be significant (see
Table 8). In fact, these variables explained nearly 60% of the variance in opportunism.

The proposed view of opportunism as an equity-balancing mechanism received some support. It was positively associated with alternatives, and negatively associated with goal congruency as hypothesized. However, while investment and switching cost were directly associated with opportunism as hypothesized, the indirect paths from investment and switching cost via alternative and goal congruency suppressed these associations because they were negative in sign. As a result, their combined or total effects were nonsignificant, although the investment-opportunism effect approached significance suggesting that in a larger sample it might have been significant. Thus, as past or sunk costs (investments in the relationship) increased, opportunism may have been (weakly) likely to increase. This suggests that subjects may have been (weakly) likely to have compensated for some of their past relationship costs using opportunism, and thus opportunism may have been a (weak) sunk cost re-balancing mechanism for some subjects in the study context.

Anderson (1988) also observed an hypothesized quadratic in goal congruency (Ouchi 1979). This quadratic (goal congruency squared) was significant in the present study and it intensified the investment and switching cost effects so they were significant in total. However, their comparative effect size when compared to goal congruency still suggested that investments and switching costs were considerably less important in the study context when compared to goal congruency and alternative attractiveness. Thus, while the opportunism associations with goal congruency and investment are predicted by Transaction Cost Analysis (see Anderson 1988), the alternative association is not, and a fair comparison of the two perspectives on opportunism, Equity versus Transaction Cost Analysis, is that an equity view generates several novel hypotheses, one or two of which were weakly "confirmed" in the present study, in that they were
not strongly disconfirmed.

In study of buyers and suppliers, Jap and Anderson (2003) observed an interaction with opportunism. In that study, among respondents reporting low opportunism, the goal congruency-opportunism association was nonsignificant, and investment, among other variables, was significant. With high opportunism, goal congruency was significant, and investment was less so. In the present study, with high opportunism, alternatives, investment, and goal congruency were significant and the quadratic in goal congruency was nonsignificant. However, with low opportunism, satisfaction and the quadratic in goal congruency were significant and goal congruency was nonsignificant. While other explanations are plausible, this suggests the antecedents of opportunism may be context dependence.

Turning to the nature of opportunism, 34.8% of the sample disagreed or strongly disagreed they were opportunistic, suggesting that opportunism may have been common in the sample. This percentage was reduced to 20% for subjects with high goal congruency and few attractive alternatives. However, this suggests that while opportunism was likely to have been attenuated for some in the study, it may also have been an innate human tendency as Williamson (1975), among others argued.

Opportunism has been characterized as unlikely in individuals (e.g., Hill 1990), and others have argued that tolerating it may be less expensive than the sacrifices required to reduce it (Williamson 1981). Nevertheless, recalling that opportunism, for example padded expense reports, when discovered, might be viewed by outsiders as grounds for dismissal in this era of Sarbanes-Oxley, it now may be increasingly important to hold opportunism at bay in selling organizations. Fortunately several management activities that might have increased voice in the study, and reduced exiting and neglect were also likely to reduce opportunism. Specifically,
increasing goal congruency and alternative attractiveness reduced the reported opportunism percentage in the present study to 20%. Of these, increasing the salespersons' perceptions of goal congruency had the largest effect on opportunism.

Parenthetically, it may have been fortunate that investment had a small effect on opportunism in the study. These results suggest that investment may be a two-edged sword. Increasing it should reduce subject mobility (Jackson 1985, Klemperer 1987) and thus their exiting. However, in the study higher investment appeared to be (weakly) associated with higher opportunism. Thus, while lower investment might have produced lower opportunism in the study, its effect may not have been strong enough to dissuade managers in the study from maintaining or increasing investment because of the mobility reduction effects it should produce.

ANTECEDENTS

Increasing Satisfaction

The hypothesized linkages among antecedents of the responses to relationship problems were all significant in the hypothesized directions. Investment and goal congruency, for example, were antecedents of satisfaction. In fact these two antecedents of the responses to relationship problems explained more than 60% of the variance in satisfaction (see Table 4). However, goal congruency by far had the largest effect on satisfaction (see Table 8).

The maintenance of relationship satisfaction is obviously desirable in salesperson-employer relationships. It has been reported to be strongly and positively associated with organizational commitment in other studies, and it was empirically identical to organizational commitment in the present study. Because organizational commitment, and indirectly, satisfaction, have been negatively related to exit intention (see Brown and Paterson 1993), and satisfaction reduced exiting and neglect, and increased voice and loyalty, in the present study, several new strategies
for salesperson satisfaction management in the study were suggested. Sixty-one percent of the variance in relationship satisfaction was explained primarily by goal congruency and to lesser extent investment (see Table 3). This suggests that satisfaction management activities aimed at increasing goal congruency and relationship investment may be important to relationship maintenance in this context.

However, there is little in the personal selling literature on the management of goal congruency. Thus, it may be instructive to look at the items that composed opportunism. The logic for looking at opportunism is, using Aristotelian logic, if A implies B, then not B implies not A. Or, in this case if goal congruency is likely to imply not opportunism, then not opportunism is likely to imply (not not) goal congruency. Factor 1 of opportunism was composed primarily of items involving the company's lack of candor, and the requirement for altered facts and exaggerated needs to get what is needed. Other opportunism items included the requirement for presenting facts so the subject looks good, and that honesty does not pay. Thus goal congruency in this context might have been increased, for example, by improved management candor and reduced difficulty in getting what is needed, presumably for selling or the customer. Unfortunately, the items of goal congruency are less revealing. The strongest loading item on goal congruency was the sense of team effort between the subject and the company. Thus, goal congruency in this context might have been increased using, for example, "beat the boss" golf outings. Investment might have been increased by increasing relationship specific investments in, for example, product training, and by emphasizing longevity with valuable awards for longevity.

Parenthetically, the logic involving the items of opportunism suggest a novel approach to managing turnover using goal congruency. Specifically, since goal congruency was likely to reduce exiting, improved management candor, reduced difficulty in getting what is needed, and
rewarding honesty may have been likely to attenuated exiting.

**Reducing Alternative Attractiveness**

The Figure 1 satisfaction-alternatives path and the paths to alternatives from investment, switching cost and goal congruency were all significant in the hypothesized directions (see Table 8). In fact more than half of the variance in alternatives was explained by these variables. Specifically, satisfaction followed by goal congruency were most likely to decrease alternative attractiveness in the study. These results suggest that salespersons in the study were likely to devalue their alternatives, as Johnson and Rusbult (1989) and others argued, primarily as the relationship quality variables, satisfaction and goal congruency, increased, and secondarily as structural constraints such as investments and switching costs increased.

Sales managers in the study interested in reducing alternative attractiveness and thus reducing exiting, neglect and opportunism, and cultivating voice may have considered two approaches: indirectly by increasing satisfaction, investment, switching costs and goal congruency, and directly by, for example, tailoring promotional activities specifically for their sales persons in order to reduce alternative attractiveness. Promoting superior sales support, comparatively or unilaterally, for example, may be efficacious. Providing "success stories" in newsletters, ostensibly aimed at customers but directed to sales persons, that tell of other customers who switched from the competition firms may also be useful.

**Increasing Switching Costs**

Switching costs had the antecedents satisfaction, investment and goal congruency. Of these antecedents satisfaction and investment were largest, followed by goal congruency. Thus, managers in the study interested in increasing switching costs and thus increasing loyalty and decreasing exiting may have done so by increasing its antecedents, and, for example, increasing
benefits that would be lost in exiting such as improved educational benefits for the subject or their family.

Organizational Commitment

Organizational commitment did not perform well in the study. Its discriminant validity has not been previously investigated as far as we know, and it was discriminant invalid, empirically indistinct from several other constructs, in the study. For example, organizational commitment's association with satisfaction in the study may have been due to the fact that all of its variance was shared with satisfaction or due to measurement error (see Endnote 9 for details). Stated differently, organizational commitment contained no error-free variance that was not shared with satisfaction--its squared correlation with satisfaction. This was also true for organizational commitment and exiting, alternatives and goal congruency in the study (see Table 2).

We probed the itemization of organizational commitment by omitting the six negatively worded items as Mowday, Steers and Porter (1979) suggested, and by omitting the exiting items to reduce the overlap with exiting (e.g., Davy, Kinicki and Scheck 1991). Unfortunately, it was still discriminant invalid, and it produced discriminant invalidity results that were nearly identical to those reported in Table 2.

We elected not interpret the results of the Figure 1 model with organizational commitment because the model was difficult to estimate without remediation, and the remediated model's coefficient estimates did not always agree with those from the Figure 1 model without organizational commitment. For example, several coefficient estimates involving satisfaction and alternatives, variables with which organizational commitment was indistinct, were different in the Figure 1 model with organizational commitment. However, for associations involving variables with which organizational commitment was distinct, in total it strongly increased voice
and it strongly decreased neglect, as hypothesized (see Table 8). While such results should be considered provisional because of the difficulties with organizational commitment just discussed, this hints that salespersons who are organizationally committed may be likely to be vocal, and by implication salespersons who are not vocal may also be not likely to be organizationally committed. In addition, since organizational commitment was subsumed by exiting, salespersons who are not vocal may also be likely to be exiting.

However, lack of empirical distinctness could be viewed as suggesting alternative operationalizations of organizational commitment. The rationale is that since all the error-free variance of organizational commitment is shared with, for example, alternatives, decreasing that variable should have increased organizational commitment in the study, even though the association was postulated to be in the opposite direction.

*Goal Congruency*

While its single hypothesized antecedent, investment, was significantly associated with goal congruency, this association was comparatively small and it explained little variance in goal congruency. Nevertheless, goal congruency was a powerful antecedent in the study. It produced several of the largest associations in the study. For example, its association with satisfaction, and with opportunism and exiting were second only to the satisfaction association with alternatives (see Table 8). The management of goal congruency in this study was mentioned previously during the discussion of satisfaction.

*IMPLICATIONS*

While generalizing from a single study is risky, most of the plausible implications of the study results have been discussed above. Nevertheless, most of the structural constraint (Ping 1993) associations with the responses to relationship problems, those involving alternatives,
investments and switching costs, were significant or approached significance. But, as a group their effects on the responses were comparatively minor compared to the relationship quality variables of satisfaction, goal congruency and possibly organizational commitment in the study. This suggests that busy managers in the study may have preferred to manage relationship quality before tackling structural constraints.

As far as we know, this is the first investigation of discriminant validity in the Mowday, Steers and Porter's (1979) organizational commitment scale. As previously discussed, organizational commitment was operationally the same construct as satisfaction and goal congruency in the present study, and it was operationally subsumed by alternative attractiveness, exiting, and perhaps opportunism. While organizational commitment's indistinctness from other relationship variables might have been remedied by a different operationalization (e.g., Allen and Meyer 1990), this may be a daunting task. As previously mentioned, re-itemizations of organizational commitment produced the same lack of discriminant validity in the present study. Further, Allen and Meyer (1990) have suggested that satisfaction and organizational commitment are facets of a higher order construct, affective commitment. If this is correct (see Ko, Price and Mueller 1997), it means that organizational commitment and satisfaction should be highly correlated: their items should measure the same higher order construct, affective commitment. While the distinctness or lack thereof in organizational commitment and satisfaction is unknown in other studies involving them jointly, it may be empirically incorrect to continue to specify organizational commitment, in the Mowday, Steers and Porter's (1979) sense, with satisfaction, without first checking their discriminant validity (i.e., to verify that they are empirically distinct variables).
FUTURE RESEARCH

Hirschman (1970) implied there is a progression of responses to relationship problems that begins with his notion of loyalty. Ping (1999) proposed that loyalty is likely to be followed voice, then neglect and finally exiting. Although loyalty was not highly correlated with voice in the present study, it might be interesting and instructive to investigate further the correlations among loyalty, voice, neglect and exit shown in Table 2.

Most of variance in loyalty, voice, neglect, switching cost and goal congruency were unexplained in the present study. As the satisfaction-alternatives interaction in voice suggested, interactions and quadratics do not usually explain much variance. Nevertheless, other (hypothesized) interactions and quadratics might account for some additional variance in loyalty, voice and neglect. In addition, modeling the plausible linkages among the responses to relationship problems just mentioned might account for more variance in voice and neglect.

However, we suspect that more theoretical work is needed on loyalty, voice, neglect, switching cost and goal congruency. For example, the variability in the alternatives-voice association should probably be investigated further. Post hoc probing uncovered an interaction with satisfaction in that association. However, based on the low explained variance in voice, additional variability may be due to the absence of important explanatory variables—the missing variables problem (see James 1980, Ping 2004). There was also evidence of two sub segments of neglect based on whether or not they intended to exit the relationship. Turning to voice, although there was little evidence of it in the present study, vocal subjects may return to being loyal if voice is efficacious. In addition, Hirschman's loyalty may be a personality trait for some: Singh (1990) found some consumers were passive when it came to voice, and in the present study 28% of the sales persons with more than 15 years with the same employer agreed they were loyal.
The study results suggest the notion of organizational commitment may also need more work. Summarizing recent arguments by several authors (e.g., Allen and Meyer 1990) and our own thoughts on relationship commitment, it should be a combination of wanting to stay in the relationship, and having to stay in the relationship (Johnson 1982). Wanting to stay in a relationship may have several facets including satisfaction and affective attachment, and possibly a moral belief that one ought to stay in the relationship, and a contribution to one's identity provided by the relationship. Affective attachment may have facets including the acceptance of relationship norms and values, a willingness to exert effort on behalf of partner, and the desire to remain in the relationship. Having to stay in a relationship may have several facets including alternatives, investments and switching costs. However, recent attempts to operationalize a multifaceted (organizational) commitment have suggested its operationalization and specification also may need work (e.g., Ko, Price and Mueller 1997).

Little is known about interventions to reduce neglect and turnover (exiting). While its comparatively large associations suggest that goal congruency may provide a fresh approach to attenuating neglect and turnover, there are no studies that address the efficacy of what might work.

**SUMMARY AND CONCLUSION**

This research investigated a revised Hirschman-Rusbult-Ping model of responses to relationship problems, loyalty, voice, opportunism, neglect, as well as turnover (exit) propensity in a personal selling context. The model included the new antecedents, organizational commitment and goal congruency, in addition to satisfaction, alternative attractiveness, past relationship investment and switching cost, and it contained proposed linkages among the model antecedents.
The research also proposed an alternative theoretical view of employee opportunism, as an equity-restoring mechanism, to generate several unexplored associations. Further, it argued that several hypotheses in the Hirschman-Rusbult-Ping model were incorrectly stated in the past.

The model test suggested additional insight into Hirschman's loyalty, and Rusbult et al.'s (1982) neglect. In addition, the magnitude of the goal congruency associations hinted at a fresh approach to managing turnover using goal congruency. It also produced unexpected findings such as the discriminant invalidity of organizational commitment in the study. Specifically, the relationship between salesperson overall satisfaction and their organizational commitment was more complex in the study than previous research has suggested. Relationship satisfaction was empirically indistinct from organizational commitment using two measures of satisfaction and a well-researched measure of organizational commitment. While it may yet be possible to operationally separate these constructs, the present results hint there may be little practical difference between these two mental constructs for salespersons.
REFERENCES


Brown, Steven P. and Robert A. Peterson (1993), "Antecedents and Consequences of


Fornell, Claes and David F. Larker (1981), "Evaluating Structural Equation Models with


Mowday, Richard T., Richard M. Steers and Lyman W. Porter (1979), "The Measure of


Rosse, Joseph G. and Howard E. Miller (1984), "Relationship Between Absenteeism and Other Employee Behaviors," in *Absenteeism*, Paul S. Goodman, Robert S. Atkin and Associates,


Sverke, M. and S. Goslinga (2003), "The Consequences of Job Insecurity for Employers and


Organizational commitment (OC) was excised from the final structural model because it was empirically indistinct from satisfaction (SAT) and Goal Congruency (GCon), and it was subsumed by several other model variables (see Footnote b in Table 2).
### Table 1 - Summary of the Study Measures

<table>
<thead>
<tr>
<th>Construct</th>
<th>Conceptual Definition</th>
<th>Conceptual Domain</th>
<th>Operational Definition</th>
<th>Sample Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction (SAT)</td>
<td>A global evaluation of relationship fulfillment.</td>
<td>Overall rating of the relationship; an appraisal of the relationship attributes that are rewarding, profitable, or instrumental.</td>
<td>The belief that the relationship is satisfactory.</td>
<td>All in all, my relationship with my company is very satisfactory.</td>
</tr>
<tr>
<td>Organizational Commitment (OC)</td>
<td>Identification and involvement in an organization.</td>
<td>The degree to which the individual identifies and is involved with the organization.</td>
<td>Belief that the employer is the best possible choice of employers.</td>
<td>I really care about the fate of this organization.</td>
</tr>
<tr>
<td>Goal Congruency (GCon)</td>
<td>The perception that what is beneficial or harmful to one relationship party is beneficial or harmful to the other.</td>
<td>Common beliefs, actions, etc. between the relationship partners.</td>
<td>The belief that the salespersons' and the company's goals and objectives are comparable.</td>
<td>Our salespeople strongly feel that they and the company work for common goals and objectives.</td>
</tr>
<tr>
<td>Alternative Attractiveness (ALT)</td>
<td>A global evaluation of the relationship fulfillment available in the best available alternative relationship.</td>
<td>An overall evaluation of the most salient and available alternative relationship, and generalized perceptions of the rewards available in that relationship.</td>
<td>Satisfaction believed available in the best alternative relationship, above that available in the current relationship.</td>
<td>In general, I would be __ satisfied with the alternative company than/as I am with my company. a. Much more b. Slightly more c. As d. Slightly less e. Much less</td>
</tr>
<tr>
<td>(Past) Investment (INVST)</td>
<td>The cost to build and maintain the current relationship in anticipation of future exchanges</td>
<td>Economic (e.g., money), activity (e.g., effort), and opportunity costs (e.g., time).</td>
<td>Magnitude of the cost that went into building and maintaining the current relationship.</td>
<td>Overall I have invested a lot in the relationship with my company.</td>
</tr>
<tr>
<td>Switching Cost (SCost)</td>
<td>The cost to change to an alternative relationship.</td>
<td>Economic, activity, and opportunity cost to end the current relationship and secure an alternative relationship, and the psychic cost to achieve this end.</td>
<td>The cost and loss that would be required to terminate the current relationship and secure an alternative relationship.</td>
<td>Considering everything, the costs to leave my current employer and join the best alternative company would be high.</td>
</tr>
<tr>
<td>Loyalty (LOY)</td>
<td>Abiding relationship problems in silence with confidence that things will get better.</td>
<td>Viewing problems as transitory phenomena that fix themselves; from the subject's perspective, problems work themselves out or are fixed by others, so the subject ignores them.</td>
<td>The predisposition to overlook problems because they fix themselves.</td>
<td>I will disregard any problem I have with this organization because I am sure that things will be better soon.</td>
</tr>
<tr>
<td>Voice (VOI)</td>
<td>Constructive attempts by the subject to change objectionable relationship conditions.</td>
<td>Actively seeking problem removal by contacting relationship partner in a positive relationship preserving manner, and cooperatively discussing and working with partner to improve the situation.</td>
<td>The intention to notify constructively and work with partner to solve relationship problems.</td>
<td>I will suggest changes if I have problems with the company.</td>
</tr>
<tr>
<td>Neglect (NEG)</td>
<td>Allowing the relationship to deteriorate.</td>
<td>Not caring about the relationship, expending no effort to maintain the relationship, and willingness to let the relationship deteriorate.</td>
<td>Planning to do nothing to improve conditions in the relationship.</td>
<td>If things are not right with my employer I will consider letting the relationship die a slow death.</td>
</tr>
<tr>
<td>Exit Propensity (EXI)</td>
<td>The disinclination to continue the current relationship.</td>
<td>Thinking of exiting, intending to search for alternatives, evaluating alternatives, intending to exit.</td>
<td>Planning to leave the relationship.</td>
<td>I will probably consider working for another company in the near future.</td>
</tr>
<tr>
<td>Opportunism (OPP)</td>
<td>Self interest seeking with guile.</td>
<td>Actions that maximize one's self-interest at the expense of the relationship partner.</td>
<td>The belief that salespersons in the company must deceive the company to get what they need.</td>
<td>Our salespeople feel they sometimes have to exaggerate their needs in order to get what they really need from the company.</td>
</tr>
</tbody>
</table>
Error disattenuated correlations from the Figure 1 measurement model containing organizational commitment (OC). The correlations in the Figure 1 measurement model without OC differed from those shown in the third decimal place.

Organizational commitment (OC) was judged to be empirically indistinct from SAT, ALT, EXI, and GCon, and nearly so for OPP (see Table 1 for definitions of SAT, ALT, etc.). OC and SAT for example had more shared variance, the square of their correlation \(0.8892^2 = 0.7907\), than either one had in error-free variance--their AVE’s (= .4726 and .7252 respectively). Stated differently, all of the error free variance of OC, 47.26%, and all of the error free variance of SAT, 72.52%, was shared between the two variables (the square of their correlation \(0.8892^2 = 79.07\%\)) (i.e., OC and SAT were empirically the same variable). However, because SAT was empirically distinct from the other study variables while OC was not in several other cases (OC and ALT, for example had more shared variance of 72.52%).
Table 2 (cont'd.)- Correlations, Reliabilities and Average Extracted Variances (AVE)

<table>
<thead>
<tr>
<th></th>
<th>Squared Correlation</th>
<th>AVE of:</th>
<th>Conclusion:</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT</td>
<td>0.7252</td>
<td>0.7907</td>
<td>0.4726</td>
</tr>
<tr>
<td>SAT-OC</td>
<td>0.7252</td>
<td>0.7907</td>
<td>SAT &amp; OC empirically identical constructs.</td>
</tr>
<tr>
<td>ALT</td>
<td>0.7420</td>
<td>0.5323</td>
<td>0.4726</td>
</tr>
<tr>
<td>ALT-OC</td>
<td>0.7420</td>
<td>0.5323</td>
<td>OC empirically subsumed by ALT.</td>
</tr>
<tr>
<td>OPP</td>
<td>0.6648</td>
<td>0.4213</td>
<td>0.4726</td>
</tr>
<tr>
<td>OPP-OC</td>
<td>0.6648</td>
<td>0.4213</td>
<td>OC almost empirically subsumed by OPP.</td>
</tr>
<tr>
<td>EXI</td>
<td>0.8771</td>
<td>0.5905</td>
<td>0.4726</td>
</tr>
<tr>
<td>EXI-OC</td>
<td>0.8771</td>
<td>0.5905</td>
<td>OC empirically subsumed by EXI.</td>
</tr>
<tr>
<td>GC</td>
<td>0.6814</td>
<td>0.6995</td>
<td>0.4726</td>
</tr>
<tr>
<td>GC-OC</td>
<td>0.6814</td>
<td>0.6995</td>
<td>GCon &amp; OC empirically identical constructs.</td>
</tr>
</tbody>
</table>

variance, $r(ALT,OC)^2 = -0.7296^2 = 53.23\%$, than OC had in error-free variance--i.e., all of OC's error free variance, 47.26\%, was shared with ALT), OC was reluctantly removed from the Figure 1 model. The alternative, retaining OC, was judged to be inappropriate not only because OC was convergent and discriminant invalid, the Figure 1 structural model containing OC also produced standardized structural coefficients for OC that were greater than 1, probably because of the near-collinearity between SAT and OC, and inflated standard errors that resulted in many nonsignificant structural coefficients.
Table 3: Present and Previous Studies’ Associations

<table>
<thead>
<tr>
<th>Present Study…</th>
<th>Previous Studies…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypoth---</td>
<td>Ping Rusbult Rusbult Anderson Ping</td>
</tr>
<tr>
<td>SAT-LOY</td>
<td>NS (+) NS NS NS + +</td>
</tr>
<tr>
<td>-VOI</td>
<td>+ NS NS NS + +</td>
</tr>
<tr>
<td>-OPP</td>
<td>+ NS NS NS + +</td>
</tr>
<tr>
<td>-INV</td>
<td>+ NS NS NS + +</td>
</tr>
<tr>
<td>-GRE</td>
<td>+ NS NS NS + +</td>
</tr>
<tr>
<td>-ALT</td>
<td>+ NS NS NS + +</td>
</tr>
<tr>
<td>-Scost</td>
<td>+ NS NS NS + +</td>
</tr>
<tr>
<td>ALT-LOY</td>
<td>NS NS NS</td>
</tr>
<tr>
<td>-VOI</td>
<td>+ NS NS NS + +</td>
</tr>
<tr>
<td>-OPP</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>-INV</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>-GRE</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>-ALT</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>GCon-LOY</td>
<td>NS NS</td>
</tr>
<tr>
<td>-VOI</td>
<td>+ NS NS NS + +</td>
</tr>
<tr>
<td>-OPP</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>-INV</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>-GRE</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>-ALT</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>OC-LOY</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>-VOI</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>-OPP</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>-INV</td>
<td>+ NS (+) NS + +</td>
</tr>
<tr>
<td>-GRE</td>
<td>+ NS (+) NS + +</td>
</tr>
</tbody>
</table>

See Table 1 for definitions of SAT, VOI, etc. A + sign denotes a positive association, a - sign indicates a negative association. NS denotes a nonsignificant association while a + or a - in parentheses indicates that the observed association "approached" significance in the indicated direction (+ for positive, etc.) (i.e., the association may have been significant in a larger sample).

b Directionality was reversed.
### Table 4 - Figure 1 Structural Model Parameter Estimates without Organizational Commitment

#### Loadings

<table>
<thead>
<tr>
<th>Indicators</th>
<th>SAT</th>
<th>ALT</th>
<th>INVST</th>
<th>SCost</th>
<th>LOY</th>
<th>Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>t-value</td>
<td>21.3655</td>
<td>25.4474</td>
<td>6.7198</td>
<td></td>
<td></td>
<td>Total</td>
</tr>
</tbody>
</table>

#### Betas (Unstandardized)

<table>
<thead>
<tr>
<th>SAT</th>
<th>ALT</th>
<th>INVST</th>
<th>SCost</th>
<th>LOY</th>
<th>GCon</th>
<th>Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta</td>
<td>0.1784</td>
<td>0.7683</td>
<td></td>
<td></td>
<td>0.1924</td>
<td>Total</td>
</tr>
<tr>
<td>t-value</td>
<td>3.0229</td>
<td>13.9322</td>
<td>14.8508</td>
<td>15.8872</td>
<td>15.9082</td>
<td>Total</td>
</tr>
</tbody>
</table>

#### Covariances (Unstandardized)

<table>
<thead>
<tr>
<th>SAT</th>
<th>ALT</th>
<th>INVST</th>
<th>SCost</th>
<th>LOY</th>
<th>GCon</th>
<th>Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta</td>
<td>3.2329</td>
<td>5.6360</td>
<td>5.6832</td>
<td>5.6360</td>
<td>5.6832</td>
<td>Total</td>
</tr>
<tr>
<td>t-value</td>
<td>1.3562</td>
<td>2.1754</td>
<td>2.1754</td>
<td>2.1754</td>
<td>2.1754</td>
<td>Total</td>
</tr>
</tbody>
</table>

#### Other Values

<table>
<thead>
<tr>
<th>VOI</th>
<th>OPP</th>
<th>EXI</th>
<th>NEG</th>
<th>GCon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beta</td>
<td>0.9815</td>
<td>0.9481</td>
<td>1.0000</td>
<td>0.8593</td>
</tr>
<tr>
<td>t-value</td>
<td>19.2481</td>
<td>17.7792</td>
<td>19.6772</td>
<td>18.3070</td>
</tr>
</tbody>
</table>

### Additional Information

- **Loadings** show the strength of the relationship between the indicators and their respective constructs.
- **Betas (Unstandardized)** represent the standardized regression coefficients, indicating the relative strength of the relationship between the latent variables and the indicators.
- **Covariances (Unstandardized)** indicate the correlation between the constructs.
- **Other Values** provide additional insights into the model's fit and the reliability of the constructs.
Table 4 (con’t.)- Figure 1 Structural Model Parameter Estimates without Organizational Commitment

MODEL FIT STATISTICS:\(^*\)
Chi Square/df/p-value/RMSEA/CFI/GFI/AGFI = 4629/1675/0.0/0.0798/0.8546/0.6487/0.6162

\(^*\) There is little agreement on model-to-data fit statistics (e.g., Bollen and Long 1993). GFI and AGFI may be inadequate for fit assessment in larger models (see Anderson and Gerbing 1984). A Comparative Fit Index (CFI) of 0.90 or higher suggests acceptable fit (see McClelland and Judd 1993). A Root Mean Square Error of Approximation (RMSEA) of 0.05 suggests close fit, an RMSEA between 0.051-0.08 suggests acceptable fit (Brown and Cudeck 1993, Jöreskog 1993).
Table 5- Figure 1 Measurement Model Parameter Estimates without Organizational Commitment

Loadings (see Table 4–loadings were identical to the third decimal place +/- .009)

<table>
<thead>
<tr>
<th>Construct</th>
<th>PHI</th>
<th>SAT ALT INV SCT LOY VOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHI</td>
<td>0.9529</td>
<td>Phi/Psi (0.0978) SE 9.7464 t-value</td>
</tr>
<tr>
<td>SAT</td>
<td>-0.6847</td>
<td>0.9746 Phi/Psi (0.0758) SER 9.0291</td>
</tr>
<tr>
<td>ALT</td>
<td>0.1609</td>
<td>0.4937 Phi/Psi (0.0435) SE 3.6959</td>
</tr>
<tr>
<td>INV</td>
<td>-0.0978</td>
<td>0.2789 Phi/Psi (0.0474) SE 5.1952</td>
</tr>
<tr>
<td>SCT</td>
<td>0.0480</td>
<td>0.3494 Phi/Psi (0.0202) SE 1.2666</td>
</tr>
<tr>
<td>LOY</td>
<td>-0.0719</td>
<td>0.0836 Phi/Psi (0.0386) SE 2.0940</td>
</tr>
<tr>
<td>VOI</td>
<td>0.1437</td>
<td>0.3567 Phi/Psi (0.1581) SE 6.0679</td>
</tr>
<tr>
<td>OPP</td>
<td>0.9800</td>
<td>Phi/Psi (0.1098) SE 8.9259</td>
</tr>
<tr>
<td>GCon</td>
<td>0.7204</td>
<td>-0.5227 Phi/Psi (0.0791) SE 9.1042</td>
</tr>
</tbody>
</table>

Measurement Errors (see Table 4–measurement errors were identical to the third decimal place +/- .010)

MODEL FIT STATISTICS: a
Chi Square/df/p-value/RMSEA/CFI/GFI/AGFI = 4528/1665/0.0/0.0788/0.8591/0.6556/0.6215

a There is little agreement on model-to-data fit statistics (e.g., Bollen and Long 1993). GFI and AGFI may be inadequate for fit assessment in larger models (see Anderson and Gerbing 1984). A Comparative Fit Index (CFI) of 0.90 or higher suggests acceptable fit (see McClelland and Judd 1993). A Root Mean Square Error of Approximation (RMSEA) of 0.05 suggests close fit, an RMSEA between 0.051-0.08 suggests acceptable fit (Brown and Cudeck 1993, Jöreskog 1993).
Table 6- Figure 1 Structural Model Results with Organizational Commitment

<table>
<thead>
<tr>
<th></th>
<th>SAT</th>
<th>ALT</th>
<th>INVST</th>
<th>SCost</th>
<th>GCon</th>
<th>OC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>ALT</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>-1.1554</td>
</tr>
<tr>
<td>INV</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>SCost</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>LOY</td>
<td>1.3675</td>
<td>-0.5014</td>
<td>-0.1676</td>
<td>0.0631</td>
<td>0.7381</td>
<td>-2.3304</td>
</tr>
<tr>
<td></td>
<td>4.8324</td>
<td>-3.3360</td>
<td>-1.9670</td>
<td>0.6625</td>
<td>3.4473</td>
<td>-5.1920</td>
</tr>
<tr>
<td>VOI</td>
<td>-1.4899</td>
<td>0.2549</td>
<td>0.3253</td>
<td>-0.0018</td>
<td>-0.4235</td>
<td>2.3153</td>
</tr>
<tr>
<td></td>
<td>-5.6779</td>
<td>1.9023</td>
<td>4.2330</td>
<td>-0.0217</td>
<td>-2.2218</td>
<td>5.6212</td>
</tr>
<tr>
<td>OPP</td>
<td>0.3419</td>
<td>0.0904</td>
<td>0.1878</td>
<td>0.0934</td>
<td>-0.4721</td>
<td>-0.5749</td>
</tr>
<tr>
<td></td>
<td>2.1314</td>
<td>1.0331</td>
<td>3.6374</td>
<td>1.6234</td>
<td>-3.8271</td>
<td>-2.3626</td>
</tr>
<tr>
<td>EXI</td>
<td>--</td>
<td>0.3157</td>
<td>0.0230</td>
<td>-0.2438</td>
<td>0.0338</td>
<td>-0.4753</td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>4.6468</td>
<td>0.5809</td>
<td>-5.4478</td>
<td>0.3758</td>
<td>-4.0789</td>
</tr>
<tr>
<td>NEG</td>
<td>0.3327</td>
<td>-0.1350</td>
<td>-0.0762</td>
<td>0.0724</td>
<td>0.6529</td>
<td>-1.6279</td>
</tr>
<tr>
<td></td>
<td>1.6686</td>
<td>-1.2235</td>
<td>-1.2019</td>
<td>1.0194</td>
<td>4.0937</td>
<td>-5.0725</td>
</tr>
<tr>
<td>GCon</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>OC</td>
<td>0.6449</td>
<td>--</td>
<td>-0.0384</td>
<td>0.0160</td>
<td>0.3713</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>11.0894</td>
<td>--</td>
<td>-1.2318</td>
<td>0.4875</td>
<td>7.0187</td>
<td>--</td>
</tr>
</tbody>
</table>

MODEL FIT STATISTICS:
Chi Square/df/p-value/RMSEA/CFI/GFI/AGFI = 5929/2166/0.0/0.0792/0.8348/0.6231/0.5918

---

*a* Standardized structural coefficients. The table reads from column to row. For example the standardized association between SAT and VOI was -1.4899, and the corresponding unstandardized association had a significance of *t* = -5.6779. Because standardized structural coefficients should be between 0 and 1 in absolute value ( |1| ), the standardized structural coefficients greater than |1| for SAT-LOY, SAT-VOI, OC-ALT, OC-LOY, OC-VOI, and OC-NEG suggest there is something wrong. See Table 7 for a revised model and see Table 1 for the definitions of SAT, VOI, etc.

*b* There is little agreement on model-to-data fit statistics (e.g., Bollen and Long 1993). GFI and AGFI may be inadequate for fit assessment in larger models (see Anderson and Gerbing 1984). A Comparative Fit Index (CFI) of 0.90 or higher suggests acceptable fit (see McClelland and Judd 1993). A Root Mean Square Error of Approximation (RMSEA) of 0.05 suggests close fit, an RMSEA between 0.051-0.08 suggests acceptable fit (Brown and Cudeck 1993, Jöreskog 1993).
Table 7- Figure 1 Model Results with Organizational Commitment and Correlated Structural Disturbances*

BETAS (with t-values)

<table>
<thead>
<tr>
<th></th>
<th>SAT</th>
<th>ALT</th>
<th>INVST</th>
<th>SCost</th>
<th>GCon</th>
<th>OC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT</td>
<td>--</td>
<td>--</td>
<td>0.1284</td>
<td>--</td>
<td>0.7536</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>3.0281</td>
<td>--</td>
<td>14.0577</td>
<td>--</td>
</tr>
<tr>
<td>ALT</td>
<td>-0.2458</td>
<td>--</td>
<td>0.0937</td>
<td>-0.2535</td>
<td>0.1764</td>
<td>-0.6008</td>
</tr>
<tr>
<td></td>
<td>-2.0371</td>
<td>--</td>
<td>2.0302</td>
<td>-5.1847</td>
<td>1.8858</td>
<td>-3.9499</td>
</tr>
<tr>
<td>INV</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>SCost</td>
<td>0.3184</td>
<td>--</td>
<td>0.3222</td>
<td>--</td>
<td>-0.1709</td>
<td>0.0926</td>
</tr>
<tr>
<td></td>
<td>2.0487</td>
<td>--</td>
<td>5.6350</td>
<td>--</td>
<td>-1.4192</td>
<td>0.4792</td>
</tr>
<tr>
<td>LOY</td>
<td>0.3412</td>
<td>-0.1851</td>
<td>-0.1253</td>
<td>0.1271</td>
<td>0.1456</td>
<td>-0.5804</td>
</tr>
<tr>
<td></td>
<td>1.8560</td>
<td>-1.6285</td>
<td>-1.7544</td>
<td>1.5956</td>
<td>0.9986</td>
<td>-2.3142</td>
</tr>
<tr>
<td>VOI</td>
<td>-0.5137</td>
<td>-0.0824</td>
<td>0.2867</td>
<td>-0.0626</td>
<td>0.2406</td>
<td>0.5297</td>
</tr>
<tr>
<td></td>
<td>-3.2150</td>
<td>-0.8442</td>
<td>4.6222</td>
<td>-0.9138</td>
<td>1.9140</td>
<td>2.4569</td>
</tr>
<tr>
<td>OPP</td>
<td>0.1441</td>
<td>0.1577</td>
<td>0.1953</td>
<td>0.1058</td>
<td>-0.6037</td>
<td>-0.2216</td>
</tr>
<tr>
<td></td>
<td>1.1146</td>
<td>1.9642</td>
<td>3.8440</td>
<td>1.8785</td>
<td>-5.6631</td>
<td>-1.2694</td>
</tr>
<tr>
<td>EXI</td>
<td>--</td>
<td>0.3337</td>
<td>0.0226</td>
<td>-0.2444</td>
<td>-0.0095</td>
<td>-0.4313</td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>5.2847</td>
<td>0.5821</td>
<td>-5.5549</td>
<td>-0.1189</td>
<td>-4.1846</td>
</tr>
<tr>
<td>NEG</td>
<td>-0.2099</td>
<td>0.0499</td>
<td>-0.0550</td>
<td>0.1076</td>
<td>0.2874</td>
<td>-0.6457</td>
</tr>
<tr>
<td></td>
<td>-1.4888</td>
<td>0.5627</td>
<td>-0.9877</td>
<td>1.7211</td>
<td>2.4915</td>
<td>-3.2912</td>
</tr>
<tr>
<td>GCon</td>
<td>--</td>
<td>--</td>
<td>0.1415</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>--</td>
<td>--</td>
<td>2.2740</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>OC</td>
<td>0.6125</td>
<td>--</td>
<td>-0.0247</td>
<td>--</td>
<td>0.3627</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>10.0692</td>
<td>--</td>
<td>-0.7528</td>
<td>--</td>
<td>6.2303</td>
<td>--</td>
</tr>
</tbody>
</table>

SQUARED MULTIPLE CORRELATIONS FOR STRUCTURAL EQUATIONS (EXPLAINED VARIANCE)

<table>
<thead>
<tr>
<th></th>
<th>SAT</th>
<th>ALT</th>
<th>INVST</th>
<th>SCost</th>
<th>LOY</th>
<th>VOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT</td>
<td>0.6118</td>
<td>0.6146</td>
<td>-</td>
<td>0.2281</td>
<td>0.0810</td>
<td>0.2448</td>
</tr>
<tr>
<td>ALT</td>
<td>0.5944</td>
<td>0.7024</td>
<td>0.4063</td>
<td>0.0200</td>
<td>0.8526</td>
<td></td>
</tr>
</tbody>
</table>

* Standardized structural coefficients. The table reads from column to row. For example the standardized association between SAT and VOI was -0.5137, and the corresponding unstandardized association had a significance of t = -3.2150. See Table 1 for the definitions of SAT, VOI, etc.
Table 8- Total Effects for Figure 1 Structural Model

<table>
<thead>
<tr>
<th>Betas from</th>
<th>SAT</th>
<th>ALT</th>
<th>INV</th>
<th>SCT</th>
<th>GCon</th>
<th>OC</th>
<th>Construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>non-OC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.1644</td>
<td>Beta</td>
</tr>
<tr>
<td>SAT</td>
<td>-</td>
<td>0.2346</td>
<td>0.7533</td>
<td>Beta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fig. 1 Model</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13.9322</td>
<td>t-value</td>
</tr>
<tr>
<td>a</td>
<td>0.7131</td>
<td>3.8884</td>
<td>0.2350</td>
<td>Beta</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>with OC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10.0692</td>
<td>t-value</td>
</tr>
<tr>
<td>SAT</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.2346</td>
<td>0.7533</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>ALT</td>
<td>-0.7093</td>
<td>-0.7131</td>
<td>-0.1411</td>
<td>0.8446</td>
<td>13.9322</td>
<td>t-value</td>
<td></td>
</tr>
<tr>
<td>INV</td>
<td>-0.1407</td>
<td>-0.0428</td>
<td>0.3738</td>
<td>0.3888</td>
<td>-0.1422</td>
<td>0.1659</td>
<td>Beta</td>
</tr>
<tr>
<td>SCT</td>
<td>-0.2653</td>
<td>-0.0494</td>
<td>-0.0482</td>
<td>-0.0416</td>
<td>-0.0482</td>
<td>0.4792</td>
<td>t-value</td>
</tr>
<tr>
<td>GCon</td>
<td>-0.5441</td>
<td>-0.1602</td>
<td>-0.0438</td>
<td>-0.0438</td>
<td>-0.0438</td>
<td>-0.6506</td>
<td>Beta</td>
</tr>
<tr>
<td>Construct</td>
<td>-0.5822</td>
<td>-0.1948</td>
<td>-0.3278</td>
<td>-0.3278</td>
<td>-0.3278</td>
<td>5.6698</td>
<td>t-value</td>
</tr>
</tbody>
</table>

Betas from SAT ALT INV SCT GCon OC Construct
  non-OC SAT - - - - 0.2346 0.7533 Beta
  Fig. 1 Model
a
3.8884 13.9322 ... 0.1935 -0.1422 0.0802 -0.4372 Beta
GCon - - 0.1411 Beta
2.2660 t-value

Betas from SAT ALT INV SCT GCon OC Construct
  non-OC SAT - - - - 0.2350 0.7536 Beta
  Fig. 1 Model
a
3.8969 14.0577 ... -0.6243 -0.6243 -0.6243 -0.6243 t-value
GCon - - 0.1415 Beta
2.2740 t-value
OC 0.6192 - - 0.1721 - - 0.8294 - - Beta
10.0692 2.7493 14.5969 t-value

a Standardized total effects. The table reads from column to row. For example the standardized total effect of SAT on ALT was -0.7093, and the corresponding unstandardized total effect had a significance of t = -8.4980.
Endnotes

1. A scenario analysis is an experiment using the study questionnaire. The questionnaire is combined with a written description or scenario of the subject's situation. In the present case one scenario described a situation in which the student subject was a sales person with low satisfaction, many alternative employers, etc. In the next subject's scenario their satisfaction was high, etc. For the six independent variables in the Figure 1 model, there were $2^6 (= 64)$ scenarios, one for each possible combination of high or low independent variables, and each scenario was duplicated several times to increase sample size.

2. Because the pretest produced only 30 responses, psychometric assessment was limited to single constructs because factor analysis, etc. requires large samples. Thus, pretest psychometric assessment consisted primarily of comparing the pretest results to the scenario analysis results for material differences.

3. The Bagozzi (1980) measure exhibited low reliability and convergent validity in the pretests. Its Average Variance Extracted (AVE) was especially low, 0.37, suggesting the measure was 63% error (see Fornell and Larker 1981). While more than 50% error variance was unacceptable, the measure was included in the final test to gauge the results again. However, similar behavior obtained. Its AVE in the final test was higher, 0.45, but the measure was still composed of more than 50% error variance, making the results of any covariance analysis untrustworthy.

4. In addition to being multidimensional in the pretests, the Bluedorn (1982) measure exhibited implausible correlations with other study measures. For example, it was either not significantly correlated or positively correlated with the satisfaction measures--Michaels and Spector 1982 reported similar results.

5. Organizational commitment was unidimensional in the test that accompanied its proposal (see Mowday, Steers and Porter 1979). However, it has been multidimensional when used in a salespersons context (e.g., Sager 1994).

6. Other approaches were possible. For example, a second-order construct could be specified using the factors as "indicators" (see for example Gerbing, Hamilton and Freeman 1994 for more on second-order constructs). Alternatively, the indicators within each factor could be summed and an under-specified latent variable could be specified. These approaches were considered but rejected because the resulting constructs exhibited low reliability and average extracted variance.

7. Item weeding was done with considerable care to preserve content or face validity--how well the items appeared to tap the target construct. However, measures used with covariant structure analysis appear to be limited to about six items (see discussions in Anderson and Gerbing 1984, Gerbing and Anderson 1993, Bagozzi and Heatherton 1994, and Ping 2004). One explanation is that correlated measurement errors, ubiquitous in survey data but customarily not specified in covariant structure analysis, eventually overwhelm (single-construct) model-to-data fit as more than about six indicators are specified.
8. Other approaches were possible. The unidimensional items could be summed and the Figure 1 model could be estimated using a saturated model (see Williams and Hazer 1986). However, this approach was rejected for a variety of reasons including that the approach is not well documented and it is not widely used.

9. For example, in Table 2 the squared correlation between satisfaction (SAT) and organizational commitment (OC), 0.79, was greater than the Average Variance Extracted (AVE) of either SAT or OC (0.73 and 0.47, respectively). This squared correlation is the percent covariance SAT and OC share in common. Because their covariance was greater than the error-free variance of either SAT or OC, this suggested that SAT and OC were empirically indistinguishable, indistinct, in the study—they were operationally the same construct in the study (see the discussion under Organizational Commitment, and the Table 2 Footnote b for more).

10. The Figure 1 structural model without organizational commitment did not fit the data. However, freeing the satisfaction-exiting path in the Figure 1 model is theoretically justified and it produced acceptable model-to-data fit.

11. Sager (1994) observed a direct satisfaction-exit association in the presence of organizational commitment. However, that study's associations did not account for measurement error that can produce inefficient structural coefficient estimates (i.e., the structural coefficients can vary widely from study to study).

12. Directionality can sometimes be suggested using modification indices, or by specifying the path in question with paths in both directions, a non-recursive model (see Bagozzi 1980). In this case fixing the loyalty-voice path to zero and examining the resulting modification indices for the loyalty-to-voice and voice-to-loyalty paths was equivocal because the modification indices were identical. A bi-directional (non-recursive) specification of the loyalty-voice path to see which of the two paths was significant produced an unidentified model.
UNEXPLORED ANTECEDENTS OF SATISFACTION IN A MARKETING CHANNEL

Robert A. Ping, Jr.
Department of Marketing
College of Business
Wright State University
Dayton, OH 45435
937-775-3047
UNEXPLORED ANTECEDENTS OF SATISFACTION IN A MARKETING CHANNEL

ABSTRACT

This paper investigates several antecedents of satisfaction that are managerially actionable in marketing channel relationships. Using structural equation analysis it tests plausible simultaneous or bi-directional (nonrecursive) satisfaction-alternative attractiveness and satisfaction-voice associations to shed additional light on whether, for example, increased satisfaction is likely to reduce alternative attractiveness, as is generally believed, or vice versa. The results also suggest the existence of feedback loops to satisfaction that operate via investment in the relationship, so that relationship investment and switching cost may be antecedents of relationship satisfaction. The paper concludes with suggestions for the management of several study variables that may help maintain customer satisfaction in the study context.

INTRODUCTION

Much of the research on long-term inter firm relationships (Arndt 1979, Wind 1970) has concentrated on the creation and maintenance of these relationships (see Wilson 1995; also see Anderson and Narus 1990; Dwyer, Schurr and Oh 1987; Ford 1980; Frazier 1983; Frazier and Rody 1991; Gadde and Mattsson 1987; Håkansson 1982; Hallén, Johanson and Seyed-Mohamed 1991; Heide and John 1990, 1992; Stern and Scheer 1991; Webster 1979). As a result, it is widely believed that satisfaction is central to the creation and maintenance of these relationships (see Dwyer, Schurr and Oh 1987; Frazier 1983; Ping 1993; Wilson 1995). Dwyer, Schurr and Oh (1987), for example, suggested that relationship satisfaction may reduce the buyer-seller relationship subject’s perception of the attractiveness of alternative exchange relationship partners. Johnson and Rusbult (1989) reported a similar effect in committed interpersonal relationships, and argued that this was a relationship maintenance mechanism they termed "devaluation of alternatives." However, satisfaction has been conceptualized to be a result of comparison to alternatives, as well as relationship reward, cost, and fairness (Johnson 1982; also see Ajzen 1977; Hatfield and Traupman 1981; Kelley and Thibaut 1978; Rusbult 1980; Thibaut and Kelley 1959). Thus, alternative attractiveness may reduce relationship satisfaction (Anderson and Narus 1984; Frazier 1983; Rusbult 1980; Thibaut and Kelley 1959). In summary, it is plausible that satisfaction and alternative attractiveness may also be simultaneously or bi-directionally (nonrecursively) associated.

Similarly Ping (1993) reported that firms’ satisfaction was positively associated with their use of
voice (attempts to change rather than escape from objectionable relationship conditions) in a marketing channel. In discussing the study results, he proposed that it was plausible that firms' satisfaction increases their voice, but that their voice should subsequently increase these firms' satisfaction. Stated differently, he proposed that satisfaction and voice may also be bi-directionally or simultaneously (nonrecursively) associated.

This study investigates these bi-directional associations, and thus expands our understanding of them, because of the implications they have for relationship continuity and therefore (interfirm) relationship marketing. After discussing the linkages between satisfaction, voice and alternative attractiveness, the paper summarizes these linkages in a bi-directional or nonrecursive structural model. To be consistent with the relationship investment model for marketing channel relationships (Ping 1993; see Rusbult, Zembrodt and Gunn 1982; Rusbult, Farrell, Rogers and Mainous 1988), and in order to ensure that the structural model is identified (i.e., the structural coefficient estimates are unique), the other variables in the relationship investment model for marketing channel relationships (i.e., relationship investment and switching cost), plus several observed variables (e.g., subject firm revenue, the duration of the buyer-seller relationship, etc.), are also included in the model. A test of these proposed associations using a survey involving firms in long term buyer-seller relationships, and structural equation analysis, is then reported.

The results of the study contribute to several literatures, including relationship marketing and marketing management. For example, the study fills a gap in the reactions-to-dissatisfaction literature by providing a deeper understanding of the investment model and antecedents of satisfaction. The study also contributes to the relationship marketing literature by suggesting several managerially actionable antecedents of relationship satisfaction. Finally, the study further illuminates the antecedents of voice, which has been observed to be negatively associated with relationship exiting (Ping 1999, Spencer 1986; see Fornell and Didow 1980; Fornell and Wernerfelt 1987; Fornell and Westbrook 1984).

SATISFACTION, ALTERNATIVES ATTRACTIVENESS, AND VOICE

SATISFACTION AND ALTERNATIVE ATTRACTIVENESS

In their description of the stages in the development of buyer-seller relationships, Dwyer, Schurr and Oh (1987) suggested that for exchange relationships in the committed stage of relationship
development, satisfaction reduces the attractiveness of alternative exchange relationships. They commented that once a relationship reaches the committed phase where relationship satisfaction is high, the relationship parties do not stop noticing alternatives, but they maintain their awareness of alternatives without constant testing of the current relationship (i.e., comparison with alternatives) (p. 19). Using a comparison level (Thibaut and Kelley 1959) argument, Johnson and Rusbult (1989) proposed there is a tendency to devalue alternative relationships, that proceeds from a high level of satisfaction with the present relationship (also see Ping and Dwyer 1988). From this perspective, alternatives should appear less attractive because the subject’s comparison level (CL) (Thibaut and Kelley 1959) has been increased as a consequence of involvement in the present satisfying relationship (p. 968).

However using almost the same arguments, alternative attractiveness is regarded by some authors as an antecedent of satisfaction (see Johnson 1982; Kelley and Thibaut 1978; Thibaut and Kelley 1959). Johnson (1982) argued that satisfaction grows out of the rewards and costs with the present partner, comparison of these rewards and costs to those available from other partners, and the relative payoffs (equity) between the partners (p. 54). In particular, they argued that as alternative attractiveness increased, overall satisfaction with the incumbent relationship should decline. Thus it is plausible that satisfaction and alternative attractiveness are bi-directionally related: satisfaction should negatively influence alternative attractiveness, and as alternative attractiveness declines, this should positively influence satisfaction. Formally,

\[ H1: \text{Satisfaction negatively influences the attractiveness of alternatives, and alternative attractiveness negatively influences satisfaction.} \]

\[ \text{SATISFACTION AND VOICE} \]

Hirschman (1970) proposed that members or clients of an organization have three behavioral options available to them when there are relationship problems: exit the relationship, use voice, or remain loyal (i.e., refuse to exit the relationship, and suffer in silence, confident that things will get better, p. 38). Arguing for the importance of voice at a time when exiting was believed to be the primary reaction to relationship problems, he explained that voice also alerted a firm to its failings. His arguments for the importance of voice are instructive. First he argued that firms will unavoidably have what he termed performance lapses in their products or services. However, he noted that losses from customer exiting will be small for a firm with demand that is highly inelastic with respect to these lapses. However, repair
of these lapses may not take place because the firm may not be alerted that something is wrong with its product or service. At the other extreme, he argued that if demand is highly elastic with respect to performance lapses, repair may also not take place; this time because the firm will cease to exist because of customer exiting. For repair to be possible he argued, the firm's elasticity of demand with respect to performance lapses should be neither very large nor very small. Instead, the firm should have a mixture of what he termed alert and inert customers. Alert customers would make the firm aware of its failings via exit and voice, but the inert customers would provide it with the time and dollar cushion needed for repair efforts to come to fruition (p. 24).

Not surprisingly, Hirschman (1970) recommended that firms provide mechanisms to increase customer voice and thus increase the firm’s likelihood of being alerted to its performance lapses. Another argument for encouraging voice is that it decreases elasticity with respect performance lapses: some vocal customers will likely not exit until it is clear that their voice is having no effect. Not surprisingly, voice has been observed to be associated with reduced relationship exiting (Ping 1999, Spencer 1986). Other authors have argued deterministically that voice should be associated with increased market share and lower costs of obtaining new customers (Fornell and Wernerfelt 1987:345; also see Fornell and Didow 1980; Fornell and Westbrook 1984).

Echoing the Hirschman-Rusbult proposals, Ping (1993) argued that reactions to problems in channel relationships included the Hirschman-Rusbult option of voice (see Hirschman 1970; Rusbult, Zembrodt and Gunn 1982; Rusbult, Farrell, Rogers and Mainous 1988). He argued that satisfied firms in committed relationships should react to inter-firm problems with voice rather than simply exiting their relationships. However because in committed relationships their partner firms were also likely to be satisfied with the relationship, these partner firms should be likely to resolve relationship problems in a

---

1 Rusbult, Zembrodt and Gunn (1982) conceptualized voice as a combination of Hirschman’s (1970, 1974) original notion of alerting partner, plus working with partner to improve relationship conditions. This expanded notion of voice includes constructive actions aimed at relationship improvement beyond alerting partner, and more fully accounts for “...any attempt at all to change, rather than escape from, an objectionable state of affairs...” in committed relationships (Hirschman 1970:30). The Hirschman-Rusbult conceptualization of voice is consistent with Hirschman’s (1970) characterization of voice, but it seems to exclude other perhaps more negative (i.e., less relationship-maintenance oriented) conceptualizations of voice such as negative word of mouth (Diener and Grayser 1978; see Richins 1983; Singh 1990a,b). As a result, voice in the present paper involves active, constructive (i.e., relationship preserving) behavior aimed at partner and intended to change an objectionable state of affairs, including but not limited to alerting partner of relationship problems.
mutually satisfactory manner when they are made aware of relationship problems. In this manner firms' voice should be likely to further increase their satisfaction (Homans 1961), and thereby help to maintain relationships as others have argued (see Fornell and Wernerfelt 1987). In different words, committed subject firms' voice should be likely to produce favorable resolutions of relationship problems, which are then likely to increase the vocal firms' relationship satisfaction.

As a result, satisfaction and voice should also be simultaneously or bi-directionally related. That is, satisfaction should positively influence voice, and as voice increases as a result, it should positively influence satisfaction. In particular,

H2: Satisfaction positively influences voice, and voice positively influences satisfaction.

Because of their importance to the model under consideration, the other investment model variables (Ping 1993), switching cost and relationship investment, will be included in the model. In addition, although they appear to take us away from the primary focus of the study, satisfaction, variables such as subject firm revenue, the number of its employees and competitors, how long they have been open, and the duration of the buyer-seller relationship will also be included in the model to ensure structural model identification (see Bagozzi 1980a, Berry 1984, and for example Bagozzi 1980b).

INVESTMENT AND SWITCHING COST ASSOCIATIONS

Satisfaction and Relationship Investment

Satisfaction should be positively associated with investment in the relationship. In long-term buyer-seller relationships satisfied parties to these relationships should voluntarily invest in them to maintain and build them in anticipation of future exchanges (Macneil 1980). To explain, as subject firms become more satisfied with their relationships their attraction to these relationships should increase (Thibaut and Kelley 1959). Their efforts, cooperation, and thus their inputs to these relationships should therefore increase (Blau 1964; Hunt and Nevin 1974). In summary, as their satisfaction increases, subject firms' investments in their relationships should also increase. Formally,

H3: Satisfaction is positively associated with investment.
Investment and Voice

Hirschman (1970) proposed that investment in the relationship should increase the investor's use of voice (pp. 37, 40). Ping (1993) explained that increases in firms' relationship investments should make future exchanges with their partner firms perceptually more valuable (Dwyer, Schurr and Oh 1987; Frazier 1983; Thibaut and Kelley 1959). Thus, these investments should make them less likely to be passive when there are relationship problems (Rusbult, Zembrodt and Gunn 1982; Rusbult, Farrell, Rogers and Mainous 1988), because they now have more to lose if their relationships are lost (Kahneman and Tversky 1979; Walster, Berscheid and Walster 1976). As a result, as their relationship investments increase, firms should respond positively to relationship problems by preferring to contact the partner firm, and work cooperatively to resolve problems and maintain the relationship. Formally,

H4: Investment is positively associated with voice.

Investment and Switching Cost

Increased investments in relationship should increase the perceived cost of switching to another exchange relationship. As firms' investment in their relationships increase, some of these investments are likely to be relationship-specific. These investments are by definition nontransferable to other exchange relationships. If they are substantial, they should be perceived as indicative of the magnitude of the costs to establish and maintain an alternative relationship, not only because they are relationship-specific and thus they would be lost, but also because they would likely have to be reincurred in an alternative relationship. As a result, increased investment in relationships should perceptually increase the cost of switching to alternative exchange relationships (Kahneman and Tversky 1979; Walster, Berscheid and Walster 1976), and relationship investment should be positively associated with switching cost. In summary,

H5: Investment is positively associated with switching cost.

Switching Cost and Alternative Attractiveness

High perceived costs of switching to alternative relationships should decrease the attractiveness of those alternative relationships. As the costs of exiting the incumbent exchange relationship and establishing another relationship increase, the perceived costs associated with alternative relationships should also increase (Kahneman and Tversky 1979; Walster, Berscheid and Walster 1976). This in turn
should reduce the attractiveness of alternative relationships (Dwyer, Schurr and Oh 1987, Frazier 1983), and thus switching cost should be negatively associated with alternative attractiveness. Formally,

H6: Switching cost is negatively associated with alternative attractiveness.

OBSERVED VARIABLES

Voice Associations with Observed Variables

In addition to these unobserved (latent) variables, observed variables such as subject firm revenue and the number of their employees should also be associated with their use of voice. As in the satisfaction-voice association, the revenue (a reward) a firm derives from exchanges with their partner firm should make future exchanges with them more valuable (Dwyer, Schurr and Oh 1987; Frazier 1983; Homans 1974; Thibaut and Kelley 1959). As their revenue attributed to the relationship increases, the subject firm should respond positively to relationship problems by preferring to contact the partner firm and work cooperatively to resolve problems and maintain the relationship. Hence for firms' important relationships we hypothesize that,

H7: Revenue is positively associated with voice.

A firm with many employees should also be more vocal when there are relationship problems with their partner firm. All other factors being equal, firms with many employees should be more inclined to attempt to work with their partner firms to resolve relationship problems; they may not only have the personnel resources to do so, but their buyer-seller relationships are likely to be either maintained by their partner firms or maintained jointly. To explain, their size and any attendant market power should make them attractive to their partner firms as revenue sources, and this in turn should produce bilateral or partner-maintained relationships (see Dwyer, Schurr and Oh 1987). For bilateral relationships voice should a natural consequence of the relationship when there are problems (Dwyer, Schurr and Oh 1987; Macneil 1980). In partner-maintained relationships subject firm voice is likely to be rewarded by partner, and thus it is therefore likely to be repeated (Homans 1974).

\[\text{As mentioned earlier, these and several other observed variables are required for methodological purposes in order to ensure that the resulting structural model is identified, and thus that the structural coefficient estimates (i.e., } \beta \text{'s) are unique. These variables were included in the study based on a combination of the plausibility of their associations with the latent variables and their usefulness in the identification process. Although the paper concentrates on the latent variable associations, the associations of these observed variables with the latent variables in the study will be stated as hypotheses for completeness.}\]
For this reason, firms with many employees should be inclined to exercise the voice option when there were problems in the exchange relationship, and

H8: Number of employees is positively associated with voice.

Other Associations with Observed Variables

In addition observed variables, such as the length of time a firm has done business with their partner, how long a firm has been in business, and the number of competitors in a firm’s market, should be associated with that firm’s investment in their relationship with their partner firm. In particular, the length of time firms have done business with their partner firms should be positively associated with the amount of investment made by the subject firms in the relationship. In long-lived economic exchange relationships, relationship commitment in many of these relationships should have been maintained or have grown (Blau 1964), the total number of investment opportunities should have increased with the length of the relationship, and the duration of the relationship itself may be perceived by some firms as a relationship investment. As a result, investment by firms in long-lived economic exchange relationships should have increased (Dwyer, Schurr and Oh 1987; Macneil 1980).

Similarly relationship investment and switching cost should be affected by how long firms have been in business. Firms that have been in business for many years should be comparatively more knowledgeable of available alternatives, and relatively more experienced in dealing with the category of firms represented by their partner firms (Dwyer, Schurr and Oh 1987). In addition, some of these durable firms may have attractive levels of market power. Because knowledge, experience and any market power may be sources of countervailing power (Dwyer 1980), these subject firms should be less dependent on their partner firms (Emerson 1962). This reduced dependency should make these subject firms less inclined to invest in their current relationships and their costs to switch to alternative supplier relationships should therefore be less.

Finally, economic theory predicts that as the number of competitors increases, each competitor’s sales and return on investment should decrease (Chamberlin 1933). As a result, firms’ investment in their relationship with their partner firms should decline as the number of their competitors increases. Not only are the subject firms relatively less able to invest in relationships when there are many competitors, their outcomes (e.g., sales) are reduced in a crowded market and this may reduce the attractiveness of the
relationship with their partner. This in turn should reduce their relationship commitment and thus their inclination to invest in their relationships (Blau 1964). In summary,

H9: Investment is positively associated with relationship duration, and negatively associated with the number of years in business and the number of competitors.

and

H10: Switching cost is negatively associated with the number of years in business.

These associations are summarized in Figure 1.

THE STUDY

MEASURES

The observed variables were measured with open-ended questions. These items asked for the retailer's prior year sales, the number of years the retailer had done business with the primary wholesaler, the number of years the retailer had been in business, the number of competitive stores in the retailer's service area, and the retailer's number of employees. Table 1 summarizes these items.

The unobserved variables satisfaction, alternative attractiveness, voice, investment, and switching cost were measured using balanced five-point Likert scales developed by Ping (1993). These measures are discussed below using Ping's (1993) conceptualizations, and are also summarized in Table 1.

Voice

Voice, active and constructive attempts by the subject firm to change relationship conditions, was operationalized as the intention to constructively notify and work with the partner firm to change relationship conditions (Ping 1993; Rusbult, Zembrodt and Gunn 1982; Rusbult, Farrell, Rogers and Mainous 1988). The conceptual domain of voice includes actively seeking problem removal by contacting the partner firm in a positive (i.e., relationship preserving) manner, positively confronting the partner firm with problems, and cooperatively discussing and working with the partner firm to improve the situation, all with a desire to maintain the relationship.

The four items in the voice measure involved the retailer talking to the wholesaler, suggesting and discussing changes with them (one item each), and working with the wholesaler to solve mutual relationship problems.

Satisfaction
We conceptualized satisfaction as the global evaluation of relationship fulfillment by the subject firm (Dwyer and Oh 1987). Its domain encompasses attributes of the exchange relationship that the firm considers rewarding, profitable, or instrumental (Ruekert and Churchill 1984), or unrewarding, costly, unfair or frustrating (Ping 1993).

The five items in the satisfaction measure assessed the retailer's overall satisfaction with the relationship (two items), perceived fairness in the relationship with the wholesaler (two items), and how good a company to do business with the wholesaler was.

Alternative Attractiveness

The attractiveness of the best alternative exchange relationship, the subject firm’s perception of the satisfaction available in the best available alternative relationship, was operationalized as the subject firm's perception of the overall satisfaction available from the best alternative exchange relationship, in addition to the overall satisfaction available in the existing exchange relationship (Ping 1993). This conceptualization includes a firm's generalized perceptions of the rewards and costs available in the most salient available alternative exchange relationship.

The four items in the alternative attractiveness scale dealt with the retailer's perception of how good a wholesaler the best available alternative would be: its fairness, its products and services, its policies, and in general how satisfied the retailer would be with the alternative wholesaler.

Investment

We operationalized investment, the sunk costs a firm expends to build and maintain the exchange relationship in anticipation of future exchanges, as the perceived magnitude of the relationship assets that would be lost or no longer useful if the relationship were terminated (Ping 1993). The conceptual domain of investment includes sunk economic and opportunity costs such as money, time, and effort.

The final-test scale items measured the retailer's overall investment in the relationship with the wholesaler (two items), and the time, effort and energy the retailer put into building and maintaining this relationship (two items).

Switching Cost

Switching cost, the perceived magnitude of the costs required to terminate the current economic exchange relationship and secure the alternative (Porter 1980), was operationalized as the magnitude of
the additional cost and effort that would be required to change wholesalers (Ping 1993). The domain of switching cost includes monetary expenses to end the current relationship and secure the alternative, and the psychic costs to achieve this objective.

The four switching cost scale items involved the amount of retailer time and money, and the costs and losses, that would be required of the retailer in switching wholesalers.

**MEASURE PERFORMANCE IN OTHER STUDIES**

The voice, satisfaction, alternative attractiveness, investment and switching cost measures were reliable, and exhibited construct and discriminant validity in previous studies. For example, the satisfaction measure was reliable, and it exhibited construct and discriminant validity in Ping (1993), Dwyer and Oh (1987), Gaski (1986), Gaski and Nevin (1985), and Ruekert and Churchill (1984). The alternative attractiveness, voice, investment and switching cost measures were similarly reliable, and exhibited construct and discriminant validity in Ping (1993).

**SAMPLE**

The study population was hardware retailers. The sampling frame was the subscribers of a hardware retailing trade publication that was judged to represent the study population. The key informant in the sampling unit was the store owner, manager, or executive. This sample was obtained specifically for this study and it has not been used before.

A pre-test and the final test samples were selected randomly using n-th name sampling, and this produced one hundred and nine pretest names and addresses, and five hundred and ninety two final test names and addresses. The survey questionnaire was mailed to these pretest and final test samples, and two post card follow-ups in the final test produced 231 usable questionnaires (39% response). These responses were then used to determine the reliability and validity of the latent variable measures.

**RESULTS**

**Reliability**

The pretest responses were used to assess the psychometric properties of the latent variable measures. These measures were unidimensional using multiple group analysis (Anderson, Gerbing and Hunter 1987), they were internally and externally consistent (see Gerbing and Anderson 1984) using ordered similarity coefficients (Hunter 1973), and had coefficient alphas of .85 or above (see Table 2).
Using the final test responses, the psychometric properties of the latent variable measures were re-examined using LISREL 8 and maximum likelihood single and multiple confirmatory factor analysis (Jöreskog 1993). The final test measures were unidimensional, and internally and externally consistent (see Table 3). They displayed latent variable reliabilities greater than .91, and average extracted variances above .73 (Fornell and Larker 1981) (see Table 3).

The investment measure required the deletion of an item to attain internal consistency. This deletion was based on an examination of its content validity before and after item deletion, and the fit statistics available in a single factor analysis. The item deletion did not appear to impair the content or face validity of the investment measure, and it substantially improved its internal consistency.

**Validity**

The measures for the latent variables were judged to be content valid. In addition, the average extracted variances for the latent variables suggested convergent and discriminant validity for these measures (see Fornell and Larker 1981) (also see Table 3). The study's latent variables were also construct valid: they were significantly and plausibly correlated with at least one other study variable (see Table 3).

**Measurement and Structural Models**

The Goodness of Fit (GFI) and Adjusted Goodness of Fit (AGFI) indices of the measurement model were slightly low. However, Anderson and Gerbing (1984) observed that these statistics are sensitive to model parsimony and thus may be inappropriate for larger models. The measurement model corresponding to Figure 1 was judged to fit the data based on the Comparative Fit Index (CFI) (Bentler 1990) (see Bollen and Long 1993, McClelland and Judd 1993), and the Root Mean Squared Error of Approximation (RMSEA) statistic (Steiger 1990, see Browne and Cudeck 1993) (see Table 3). The Figure 1 structural model was identified and thus it coefficient estimates were unbiased, and it was also judged to fit the data based on CFI and RMSEA (see Table 4).

---

3 Fornell and Larker (1981) suggested that if the Average Variance Extracted statistic for a latent variable were greater than .5, then the common variance captured by the variable was greater than its measurement error, and this was sufficient evidence of convergent validity. They also argued that if the extracted average variances for a pair of variables were greater than the square of the correlation between these variables, each variable was distinct and this provided evidence of discriminant validity. In the present case the average extracted variances exceeded .5, and they exceeded the square of the largest latent variable correlation shown in Table 3.

4 The bi-directional associations were identified because each endogenous variable involved in these associations...
Hypotheses Test Results

The study hypotheses were generally supported (see Table 4). Of the fourteen hypothesized associations, ten of the direct associations shown in Figure 1 (e.g., voice-to-satisfaction, satisfaction-investment, etc.) were significant. However, the satisfaction-voice and satisfaction-alternative attractiveness associations were not bi-directional; the investment association with voice, and the years-in-business-switching-cost associations were not significant; and the revenue-voice association was negative instead of positive. The association between voice and satisfaction was from voice to satisfaction only, and satisfaction did not directly affect voice (although satisfaction was significantly but indirectly associated with voice via investment, which will be discussed shortly). Similarly, alternative attractiveness affected satisfaction, and satisfaction did not directly affect alternative attractiveness (although satisfaction was also significantly but indirectly associated with alternative attractiveness via investment and switching cost, which will also be discussed shortly).

A second structural model was estimated by trimming the nonsignificant bi-directional paths in Figure 1 (i.e., the satisfaction-to-voice and satisfaction-to-alternative attractiveness paths were dropped). The structural model estimation results from this trimmed model are shown in Table 5. Overall, the interpretation of the structural coefficients changed little between the two models, except for the voice association with investment, which approached significance in the bi-directional model, and was significant in the trimmed model. Table 6 shows the total (i.e., direct plus indirect) effects among the study variables in the trimmed Figure 1 model (see Bollen 1989:376). As this exhibit suggests, while satisfaction did not significantly affect alternative attractiveness directly in the trimmed model (see Table 6), satisfaction did have an indirect effect on alternative attractiveness through investment and switching cost.

(i.e., satisfaction, voice, and alternative attractiveness) had one or more instrumental variables (see Berry 1984). The Figure 1 structural model can be shown to be identified, but the formal proof is long. A sketch of the proof is as follows: Bollen (1989) argued that structural equation model identification is a separable process, and it is sufficient to prove the measurement model is identified, then prove the structural model is identified. The measurement model is identified using Bollen’s (1989:245) second two-indicator rule, and the structural model is identified using Berry’s (1984) order condition plus his algorithm.

The lack of significant bi-directional associations could be viewed as suggestive of the directions of these associations in the population, and a trimmed model may be more representative of the population model (see for example Bagozzi 1980b).

This trimmed model is also nonrecursive because of the feedback loops to satisfaction (i.e., the satisfaction-investment-voice-satisfaction loop and the satisfaction-investment-switching cost-alternative attractiveness-satisfaction loop). This model can also be shown to be identified using the Footnote 4 approach.
5), its indirect effect on alternative attractiveness voice via investment and switching cost was significant (see Figure 1 and Table 6).\(^7\) Similarly, the indirect effect of satisfaction on voice via investment in the trimmed model was also significant (see Figure 1 and Table 6).

**DISCUSSION**

**SATISFACTION AND ALTERNATIVE ATTRACTIONNESS**

The association between satisfaction and alternative attractiveness has been specified in previous research as a correlation (see for example Ping 1993; Rusbult, Zembrodt and Gunn 1982; Rusbult, Farrell, Rogers and Mainous 1988), and it has not been specified in a directional manner until now. The associations between satisfaction and alternative attractiveness were significant when they were specified as unidirectional (see Table 5 for the results of the unidirectional alternative-attractiveness-to-satisfaction path specification; the results of a model with the direction of this path reversed is not reported), while in their joint (bi-directional) specification, the alternative attractiveness-to-satisfaction path was significant, while the satisfaction-to-alternative attractiveness path was not (see Table 4).\(^8\)

However, the indirect satisfaction-alternative attractiveness path via investment and switching

---

\(^7\) These remarks depend heavily on the assumption that the direction of satisfaction-investment path is from satisfaction to investment at least in the sample. While this is arguably a plausible direction for this association, a Figure 1 trimmed model with this path reversed (i.e., pointing in the opposite direction) also fit the data (not reported), and the resulting investment-satisfaction path coefficient was significant. It is believed this suggests that both directions for the satisfaction-investment path are equally likely (see Hershberger 1994 and the citations therein). Similarly, models with combinations of the directions of the Figure 1 paths from investments or switching cost reversed also fit the data, and the path coefficients on these reversed paths were also significant. However, we fixed all of the path coefficients on the paths to and from investment and switching cost at zero and used LISREL’s modification indices to suggest the direction of these paths. With the satisfaction-investment path coefficient fixed at zero, for example, the modification index for freeing the satisfaction-to-investment path was larger than the modification index for freeing the investment-to-satisfaction path. This (weakly) suggests that the proper specification of the satisfaction-investment path is from satisfaction to investment, given this data. In summary, this approach (weakly) suggested the Figure 1 trimmed model was more appropriate that the other 8 models with combinations of their paths to and from investment and switching costs paths reversed, given this data set.

\(^8\) Significant but opposite unidirectional associations between two latent variables have been previously observed (see Bagozzi 1980b for citations). In such situations a bi-directional specification has been used to suggest which unidirectional specification is correct. Bagozzi (1980b) for example in his analysis of salesperson performance and satisfaction, used a bi-directional specification to sort out opposing unidirectional specifications of these two variables. He tested a bi-directional specification of the satisfaction-performance association and observed that only the path from performance to satisfaction was significant. In addition, his subsequent unidirectional specification of performance to satisfaction was also significant, and it is likely that the unidirectional satisfaction-to-performance coefficient would also have been significant had he reported it, based on his reported correlation between satisfaction and performance, and the performance-to-satisfaction structural coefficient also reported.
cost was (weakly) significant (see Figure 1 and Table 6). This result suggests that while all satisfied firms were not likely to devalue alternative attractiveness in the study (the direct satisfaction-to-alternative-attractiveness path was not significant, see Table 4), satisfied firms with high investment in the relationship and high perceived switching cost were (weakly) likely to devalue their alternatives. As a result, Dwyer, Schurr and Oh (1987) and others’ proposal that in a committed buyer-seller relationship the parties to this relationship may devaluate alternatives appears to be true in the study. However, the effect was indirect and weak compared to the direct alternative-attractiveness-to-satisfaction effect, and higher investment and switching cost were involved. In different words, satisfied firms were likely to slightly devalue alternatives when they had invested in the relationship and perceived there were higher switching costs.

**Satisfaction and Voice**

Until now, the path between satisfaction and voice has been assumed to be from satisfaction to voice, and it has been consistently observed to be significant in this specification (see for example Ping 1993; Rusbult, Zembrodt and Gunn 1982; Rusbult, Farrell, Rogers and Mainous 1988). Indeed, the (unidirectional) satisfaction-to-voice specification was significant in the present study (not reported). However in the Figure 1 bi-directional specification, the direct voice-to-satisfaction path was significant while the direct satisfaction-to-voice path was not significant.

Nevertheless, based on the Table 6 significant satisfaction-to-voice total effect (e.g., via the satisfaction-to-investment-to-voice path-- see Figure 1), satisfaction was still positively (but indirectly) associated with voice (however, this association was weak in comparison to the voice-satisfaction effect). These results suggest that while changes in satisfaction were not likely to directly affect voice (the direct satisfaction-voice association was nonsignificant), satisfaction was likely to increase investment, and this in turn was likely to increase voice. Stated differently, satisfaction affected voice by first increasing relationship investment.

The nonsignificant direct path from satisfaction to voice suggests that Ping’s (1993) remarks about a firm’s satisfied customers being the most likely to be vocal may be misleading. The significant

---

9 See Endnote 7.

10 See Endnote 7.
indirect path from satisfaction to voice via investment in the trimmed model suggests that only satisfied firms with high investment in the relationship were more likely to be vocal.

**Other Investment Model Associations and Feedback Loops**

These results suggest that the associations among satisfaction, alternative attractiveness, investment, and switching cost need not be specified as correlations as they have been in the past. In addition, the significant combined (total) effects shown in Table 6 suggest that satisfaction "fed back" to, or reinforced itself (i.e., affected itself), via investment, voice, switching cost, and alternative attractiveness. In this feedback loop satisfaction increased investment, which then increased voice and switching cost. Increased voice was likely to increase satisfaction, and increased switching costs decreased alternative attractiveness which increased satisfaction (see Figure 1).

While the combined effect of satisfaction reinforcing itself was comparatively weak (.031 -- see Table 6), it suggests the importance of relationship investment in this study. If opportunities to increase investment in the relationship were not available to satisfied firms in the study, there may have been no voice or structural constraint feedback loops to satisfaction, and increased overall satisfaction may have had no synergistic (i.e., feedback or reinforcing) effect on itself. Specifically, management attempts to increase satisfaction by, for example, satisfactorily resolving relationship problems, may have ended with only their direct effect on satisfaction in this study. With opportunities to increase investment in the relationship, increased satisfaction fed back through the voice and alternative attractiveness loops to further increase satisfaction.

Of these two feedback loops, the alternative attractiveness loop had the larger effect on satisfaction ($\exists^{\text{Total}}_{\text{SAT,SAT-INV-SWC-ALT}} = .021$ for the alternative attractiveness loop, $\exists^{\text{Total}}_{\text{SAT,SAT-INV-VOI}} = .008$ for the voice loop). This suggests that any attempts to reduce alternative attractiveness were not only more directly effective in increasing satisfaction in comparison with attempts to increase voice (see Table 5), they were more indirectly effective as well.

---

11 See Endnote 7.

12 However this feedback effect died out rapidly in this context. The largest eigenvalue of the indirect coefficient matrix was .432, which guarantees convergence (of the cycling through the feedback loops) to the total effects matrix shown in Table 6 (Ben-Israel and Greville 1974; see Bollen 1989). However, the coefficients in the powers of the coefficient matrix quickly become small (e.g., the largest coefficient in $B^3$ was 7.45E-08).
Finally, the two feedback loops also suggest that using voice (weakly) increased the use of voice (see the voice-voice total effect in Table 5). Similarly, investment increased investment, switching cost increased switching cost, and alternative attractiveness increased alternative attractiveness.

**IMPLICATIONS**

While it is very risky to generalize from a single study, assuming the maintenance of relationship satisfaction is desirable for maintaining buyer-seller relationships (Davidow and Uttal 1990; Dwyer Schurr and Oh 1987; Frazier 1983; Hirschman 1970; Ping 1993; see the Fall 1995 issue of the Journal of the Academy of Marketing Science), these results hint at several strategies for channel management in this context. Forty-three percent of the variance in relationship satisfaction was explained primarily by four relationship variables in the present study (i.e., voice, alternative attractiveness, investment, and switching cost-- see Table 6). This suggests that relationship management activities aimed at existing channel customers, such as reducing the attractiveness of their alternatives and cultivating their voice, along with designing and promoting opportunities for their additional relationship investment, may be important to relationship maintenance in this context (relationship satisfaction has been reported to be strongly and negatively related to exit intention-- see Ping 1993). We will briefly discuss reducing alternative attractiveness, cultivating voice, and designing and promoting opportunities for additional relationship investment by existing channel customers (also see Cravens 1995).

**REDUCING ALTERNATIVE ATTRACTIVENESS**

Since alternative attractiveness had the largest direct effect on satisfaction, the alternative attractiveness loop's effect on satisfaction was the larger of the two feedback loops, and both were negative, this suggests changes in perceptions of alternative attractiveness had the largest effect on their satisfaction in the study (see Table 6). For managers who may prefer to concentrate on only a few relationship maintenance factors, alternative attractiveness reduction might be the best strategy to maintain retailer customer satisfaction in this context.

Wholesalers interested in increasing retailer satisfaction may want to consider activities such as tailoring some of their promotional activities specifically for their established customers. Although there

---

13 For example, many of the effects were comparatively weak, and could easily have been non significant in a different study (also see Endnote 7). However, the set of responses was judged to be representative of the study population, based on published demographics.
is little guidance in a marketing channel context, comparative advertising may be effective for this purpose. In addition, activities such as providing "success stories" in a newsletter directed to retailer customers, or the company website, telling of other retailers who switched from competitive wholesalers may also be useful. For example, comparing logistics service levels may be effective (see LaLonde 1985).

**ENCOURAGING VOICE**

Similarly, since voice had the second largest effect on satisfaction, wholesalers interested in fostering long term relationships may wish to sincerely solicit retailer complaints and work to resolve them in a mutually satisfactory manner (Hirschman 1970, 1974; Fornell and Wernerfelt 1987). While Fornell and Wernerfelt (1987) suggested providing 800 numbers, and quick and competent complaint processing in a consumer context (p. 344), the situation may be more complex. For example, Laver (1976) observed that individuals have different sensitivities to quality declines. Hirschman (1970) explicitly made the same assumption (p. 24). In addition, Hirschman (1970) argued that voice was affected by the expectation of the success of voice. He elaborated by proposing that the expectation of the success of voice involves the subject's evaluation of the prospects of the declined firm getting back on track through a possible combination that firm's actions, the subject's actions, and the actions of others (p. 38). He also argued that voice was affected by the advantage to be gained by using voice (see Banfield 1961). Singh (1990b) conceptualized this advantage as the worthwhileness of complaint: the costs versus the benefits to the subject.

Hirschman (1970) speculated that the importance of the purchase would also increase voice (p. 41). This suggests that the importance of the relationship to the subject firm may also increase the likelihood of subject firm voice when there are relationship problems. In the present study the importance of the exchange relationship was high by design (the questionnaire instructions asked respondents to think of their primary wholesaler in completing the questionnaire). However, it is plausible that as the importance of the relationship declines, the picture portrayed in this study could change.

As previously mentioned, Hirschman (1970) argued there are customers that are passive (i.e., not vocal) when there are relationship problems, and he termed these customers "loyals" (see p. 3). Singh's (1990a) results suggest there are several consumer voice response styles ranging from passive, to “irate”
and “activist.” It is therefore plausible that firms may also cluster into voice response styles, and that there may be passive organizations when it comes to voice.

For these reasons, wholesalers may wish to consider additional means of increasing retailer voice, beyond 800 numbers, e-mail addresses, user community bulletin boards, and quick and competent complaint processing, such as publicizing to their retailing partners prior (successful) outcomes proceeding from the use of voice, having wholesaler sales persons actively solicit retailer voice, and using wholesaler-sponsored retailer satisfaction surveys to facilitate voice in less vocal retailing firms (e.g., those with higher revenue in this study— see Table 6).

**INCREASING INVESTMENT**

As previously suggested, investment was key to the voice and alternative attractiveness feedback loops in the present study. As a result, wholesalers may wish to consider increased emphasis on designing and marketing relationship investments to their retailing partners. Prospect theory (Kahneman and Tversky 1979) suggests that individuals, and presumably firms, should view additional relationship investment (a cost) noncumulatively. This in turn suggests that, all other things being equal, retailers with high and low levels of relationship investment should be equally likely to make additional investments in the relationship. However, the study results suggest that prior investors in the relationship are more likely to increase their relationship investment (the Table 6 INV-INV coefficient was significant). In addition, prospect theory suggests that investment opportunities should be offered as either a single large gain or a series of small costs (see Nagle and Holden 1995), depending on how the prospective investor might view the proposed investment. Opportunities for selling relationship investment could be identified using a series of customer satisfaction surveys, plus a systematic prospecting and follow-up selling activity aimed at, for example, long-time customers (see Table 6).

**FUTURE RESEARCH**

There may be more to learn about the antecedents of relationship satisfaction in marketing channel relationships. While the squared multiple correlation for satisfaction observed in this study was comparatively high, it suggests that satisfaction has other important antecedents. For example, Johnson (1982) suggested relationship satisfaction has as antecedents rewards, costs, alternative attractiveness, 14 See Endnote 7.
and equity. Alternative attractiveness, and several reward/cost related variables (i.e., investment, switching cost and possibly voice) were investigated in the present study.15

Equity (see Frazier 1983) has been subsumed by the notion of relationship justice in other literatures (see Tyler 1994 for a summary). Relationship justice has been heavily researched, and is generally conceptualized as consisting of two facets: distributive justice (i.e., the fairness of the portions of outcomes received, Adams 1963), and procedural justice (i.e., the fairness of the procedures used to determine these outcomes, Thibaut and Walker 1975). Both procedural and distributive justice have been observed to be associated with satisfaction in other contexts (e.g., Folger and Konovsky 1989), and it is plausible that, with care and attention to established concepts that may be related to procedural justice (e.g., bureaucratization, see Dwyer and Oh 1987), distributive and procedural justice may be associated with satisfaction in marketing channel relationships.

Relationship rewards and costs may have important sub-dimensions. Thibaut and Kelley (1959) proposed that the determinants of rewards and costs in a relationship included the similarity of attitudes and orientations. Anderson (1988) for example, proposed goal congruency as an antecedent of opportunism in a personal selling context. Because congruent goals should be rewarding, it is plausible that this may also be an antecedent of satisfaction in long-term buyer-seller relationships.

Social psychology could be viewed as the study of person and situation (Fiske and Taylor 1991). As a result, satisfaction could be argued to be the result of these two influences. For example, Johnson (1982:54) proposed that relationship partners may define themselves in terms of a relationship (see Goffman 1961). A wholesaler may believe that, for example, they carry “only the best,” which in turn might dictate their supplier relationships in each of their product categories. In addition, Rodin (1982) commented that changes in situation could also be important to satisfaction with the relationship. In the study context, for example, the appearance of hardware home centers such as Home Depot or Lowes in the retailer’s service area may effect hardware retailer satisfaction with their wholesaler (also see Dwyer and Oh 1987).

Another view of satisfaction would be to consider those things that produce dissatisfaction.

15 Voice may be related to rewards and costs in that it could be viewed as an attempt to reduce relationship cost and/or increase relationship reward.
Behavior that is compared to that which is expected should affect relationship satisfaction (Thibaut and Kelley 1959). Macneil (1980) and others have proposed that there are expectations in economic exchange relationships that they term relational norms (see Dwyer, Schurr and Oh 1987). In particular, Macneil (1980, 1983) and others suggest that in committed relationships these norms may include consistent behavior (i.e., role integrity, behaving as expected); mutuality (i.e., distributive justice—see the above remarks regarding justice and Kaufmann and Stern 1988); relationship preservation (i.e., solidarity, maintaining beliefs and actions that preserve the relationship—again see Kaufmann and Stern 1988), which may have as subdimensions, flexibility and harmonizing conflict (Macneil 1980); and supra-contract norms (i.e., moral conduct) (also see Noordeweir, John and Nevin 1990). It is plausible that these and possibly other norms are related to satisfaction. While Frazier (1983) and others have suggested that mutuality may be the most important of these, it would be interesting and perhaps valuable to channel relationship managers to know if this is empirically supported, since their performance relative to these norms should be controllable by these managers.

The results reported in the present study should be considered as suggestive of the satisfaction associations with alternative attractiveness and voice. More research is obviously required to firmly establish the lack of direct satisfaction-to-voice and satisfaction-to-alternative attractiveness effects, and the feedback loops. In particular, experiments and (longitudinal) field studies with observations of lags between satisfaction, voice and alternative attractiveness should be conducted.

It is plausible that the observed voice-to-satisfaction effect involves an indirect path via partner’s remedial action. In the present study the satisfied and invested firms that were inclined to react to relationship problems with voice may also have had partner firms that were very likely to resolve these problems. Perhaps a future study will specify partner’s remedial action separately from the voice-satisfaction path to test for the possibility that voice may itself be rewarding (see Hirschman 1974; Singh 1990a).16

As a final observation it would be interesting, and perhaps valuable to marketing channel managers, to investigate the efficacy of advertising that is specifically aimed at existing retailers, and

16 Hirschman (1974) proposed that the exercise of voice itself is satisfying. While his remarks were aimed at the possibility that it was satisfying to use voice in and with a group (Blau 1964), Singh (1990a) found that consumer voicers variously reported that it bothered them not to complain, and that it felt good to complain.
designed to reduce alternative attractiveness. While some marketing practitioners believe comparative advertising works in a consumer context (see Rossiter and Percy 1987), there is relatively little guidance for comparative advertising aimed at long term channel partners.

**SUMMARY**

Because relationship satisfaction is important in the maintenance of long-term buyer-seller relationships (Davidow and Uttal 1990; Dwyer Schurr and Oh 1987; Frazier 1983; Hirschman 1970; Ping 1993), the paper reported the results of an investigation of the managerially actionable antecedents of satisfaction proposed in the investment model (Ping 1993; see Rusbult, Zembrodt and Gunn 1982; Rusbult, Farrell, Rogers and Mainous 1988). In the study, hardware retailers' satisfaction in their relationship with their primary wholesalers had direct antecedents that included their perception of alternative attractiveness and their use of voice, and indirect antecedents that included their relationship investment and their switching cost. In particular, retailers' satisfaction was likely to be negatively affected by their perception of alternative attractiveness, and it was likely to be positively affected by their use of voice, their relationship investments, and their perceived switching cost.

The study results suggested the existence of a (weak but significant) feedback loop in which firms' satisfaction was likely to reduce the attractiveness of their alternatives, which in turn further increased their relationship satisfaction. A second weak feedback loop was also observed, in which firms' satisfaction was likely to increase their voice, which in turn was likely to further increase their relationship satisfaction. These feedback loops to satisfaction operated via subject firm investment in the relationship, which suggested the importance of the availability of relationship investment options, and opportunities to exercise these options in the study.
REFERENCES


Arndt, Johan (1979), "Toward a Concept of Domesticated Markets," Journal of Marketing, 43 (Fall), 69-75.


______ (1980b), “Performance and Satisfaction in an Industrial Sales Force: An Examination of Their Antecedents and Simultaneity,” Journal of Marketing, 44 (Spring), 75-77.


Association for Consumer Research, 318-23.


Econometrica, 47 (March), 263-291.
Laver, Michael (1976), "Exit, Voice and Loyalty Revisited," British Journal of Political Science, 6 (October), 463-482.
Webster, Fredrick E., Jr. (1979), Industrial Marketing Strategy, New York: John Wiley and Sons, Inc.
<table>
<thead>
<tr>
<th>Construct</th>
<th>Conceptual Definition</th>
<th>Operational Definition</th>
<th>Items</th>
<th>Sample Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternative Attractiveness (ALT) wholesaler.</td>
<td>Global evaluation of the relationship fulfillment available in the best available alternative relationship.</td>
<td>Satisfaction believed to be available in the best alternative relationship.</td>
<td>4</td>
<td>Overall the alternative wholesaler would be a much better company to do business with than the current</td>
</tr>
<tr>
<td>Investment (INV)</td>
<td>Cost to build and maintain the current relationship in anticipation of future exchanges.</td>
<td>Magnitude of the cost that went into building and maintaining the current relationship.</td>
<td>4</td>
<td>A lot of energy, time and effort have gone into building and maintaining the relationship with the current wholesaler.</td>
</tr>
<tr>
<td>Satisfaction (SAT)</td>
<td>Global evaluation of relationship fulfillment.</td>
<td>Belief that the relationship is satisfactory.</td>
<td>5</td>
<td>All in all, my relationship with my primary wholesaler is very satisfactory.</td>
</tr>
<tr>
<td>Switching Cost (SWC)</td>
<td>Costs to change to an alternative relationship.</td>
<td>Cost and loss required to terminate the current relationship and secure an alternative relationship.</td>
<td>4</td>
<td>Generally speaking the costs in time, money, effort and grief to switch primary wholesalers would be high.</td>
</tr>
<tr>
<td>Voice (VOI)</td>
<td>Constructive attempts to change objectionable relationship conditions.</td>
<td>Intention to notify constructively and work with the primary wholesaler to solve relationship problems.</td>
<td>4</td>
<td>I work with my primary wholesaler to correct any mutual problems.</td>
</tr>
<tr>
<td>Employees (EMPL)</td>
<td>Retailer's number of employees.</td>
<td>The number of employees at your store?</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Years in Business (OPEN)</td>
<td>Number of years the retailer has been in business.</td>
<td>How many years has your store been open?</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Competitors (RIVAL)</td>
<td>Number of competitive stores in retailer's service area.</td>
<td>The number of competing stores in your service area?</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Revenue (SLS)</td>
<td>Retailer's revenue.</td>
<td>Your last year's sales?</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Years with Wholesaler (WITH)</td>
<td>Number of years the retailer has done business with the supplier.</td>
<td>How many years have you done business with your primary wholesaler?</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Table 2 -- MEASURE PSYCHOMETRIC SUMMARY

<table>
<thead>
<tr>
<th>Construct</th>
<th>Sample</th>
<th>Items</th>
<th>Initial</th>
<th>Final</th>
<th>$\chi^2$/df</th>
<th>Pretest Wording Changes</th>
<th>After Pretest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice</td>
<td>Pretest</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Final</td>
<td>4</td>
<td>4</td>
<td></td>
<td>1.9/2 .88</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Pretest</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Final</td>
<td>5</td>
<td>5</td>
<td></td>
<td>5/5 .95</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Alternative</td>
<td>Pretest</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>Final</td>
<td>4</td>
<td>4</td>
<td></td>
<td>4.1/2 .91</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Investment</td>
<td>Pretest</td>
<td>5</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Final</td>
<td>5</td>
<td>4</td>
<td></td>
<td>9.4/2 .92</td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Switching</td>
<td>Pretest</td>
<td>4</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td>None</td>
</tr>
<tr>
<td>Cost</td>
<td>Final</td>
<td>4</td>
<td>4</td>
<td></td>
<td>.78/2 .91</td>
<td></td>
<td>None</td>
</tr>
</tbody>
</table>
### Table 3: MEASUREMENT MODEL RESULTS

Latent Variable Covariances and Correlations:

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. SAT</td>
<td>.44*</td>
<td>- .52*</td>
<td>.32*</td>
<td>.25*</td>
<td>.29*</td>
<td>.10</td>
<td>.06</td>
<td>.02</td>
<td>- .00</td>
<td>- .00</td>
</tr>
<tr>
<td>2. ALT</td>
<td>- .30*</td>
<td>.74*</td>
<td>- .27*</td>
<td>- .38*</td>
<td>- .10</td>
<td>- .17*</td>
<td>- .03</td>
<td>- .12</td>
<td>- .07</td>
<td>.01</td>
</tr>
<tr>
<td>3. INV</td>
<td>.16*</td>
<td>- .18*</td>
<td>.61*</td>
<td>.55*</td>
<td>.25*</td>
<td>.11</td>
<td>- .10</td>
<td>.12</td>
<td>.07</td>
<td>- .13</td>
</tr>
<tr>
<td>4. SWC</td>
<td>.16*</td>
<td>- .33*</td>
<td>.42*</td>
<td>.95*</td>
<td>.15*</td>
<td>.09</td>
<td>.00</td>
<td>.10</td>
<td>- .05</td>
<td>- .05</td>
</tr>
<tr>
<td>5. VOI</td>
<td>.08*</td>
<td>- .03</td>
<td>.09*</td>
<td>.06*</td>
<td>.17*</td>
<td>.00</td>
<td>.00</td>
<td>.10</td>
<td>- .06</td>
<td>- .05</td>
</tr>
<tr>
<td>6. WITH</td>
<td>.08</td>
<td>- .18*</td>
<td>.12</td>
<td>.11</td>
<td>.00</td>
<td>1.47*</td>
<td>.41</td>
<td>.09</td>
<td>.09</td>
<td>.14</td>
</tr>
<tr>
<td>7. OPEN</td>
<td>.10</td>
<td>- .08</td>
<td>- .19</td>
<td>- .06</td>
<td>.00</td>
<td>1.32*</td>
<td>7.27*</td>
<td>.06</td>
<td>.06</td>
<td>.05</td>
</tr>
<tr>
<td>8. EMPL</td>
<td>.02</td>
<td>- .13</td>
<td>.13</td>
<td>.19</td>
<td>.05</td>
<td>.14</td>
<td>.23</td>
<td>1.75*</td>
<td>.51*</td>
<td>.39*</td>
</tr>
<tr>
<td>9. SLS</td>
<td>- .00</td>
<td>- .10</td>
<td>.00</td>
<td>.14</td>
<td>- .05</td>
<td>.19</td>
<td>.26</td>
<td>1.09*</td>
<td>2.60*</td>
<td>.19*</td>
</tr>
<tr>
<td>10. RIVAL</td>
<td>- .00</td>
<td>- .00</td>
<td>- .12</td>
<td>- .01</td>
<td>- .02</td>
<td>.22</td>
<td>.18</td>
<td>.65*</td>
<td>.40*</td>
<td>1.58*</td>
</tr>
</tbody>
</table>

**Model-to-Data Fit**

- Chi-Square/df/p-value: .362/259/0
- Comparative Fit Index $^c$: .976
- RMSEA $^d$: .042
- GFI/AGFI $^e$: .889/849

Average Variance Extracted:

- SAT: .770
- ALT: .768
- INV: .739
- SWC: .802
- VOI: .760

Latent Variable Reliability:

- SAT: .943
- ALT: .929
- INV: .919
- SWC: .941
- VOI: .926

---

$a$: Maximum likelihood.

$b$: Covariances on and below the diagonal, correlations above.

$c$: .90 or above suggests acceptable fit (McClelland and Judd 1993).

$d$: Root Mean Square Error of Approximation $- .05$ or less suggests close fit, $051-.08$ suggests acceptable fit (Brown and Cudeck 1993; Jöreskog 1993).

$e$: GFI and AGFI may be inappropriate for assessing fit in larger models (Anderson and Gerbing 1984).

$t$-value $> 2$. 
Table 4—FIGURE 1 (BI-DIRECTIONAL) STRUCTURAL MODEL ESTIMATION RESULTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate&lt;sup&gt;a&lt;/sup&gt;</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\gamma_{\text{VOLSAT}}$&lt;sup&gt;b&lt;/sup&gt;</td>
<td>-0.047</td>
<td>-0.28</td>
</tr>
<tr>
<td>$\gamma_{\text{SAT,VOI}}$</td>
<td>0.811</td>
<td>2.31</td>
</tr>
<tr>
<td>$\gamma_{\text{SAT,ALT}}$</td>
<td>-0.268</td>
<td>-2.47</td>
</tr>
<tr>
<td>$\gamma_{\text{ALT,SAT}}$</td>
<td>-0.289</td>
<td>-1.55</td>
</tr>
<tr>
<td>$\gamma_{\text{INVSAT}}$</td>
<td>0.275</td>
<td>3.38</td>
</tr>
<tr>
<td>$\gamma_{\text{VOLINV}}$</td>
<td>0.091</td>
<td>1.64</td>
</tr>
<tr>
<td>$\gamma_{\text{SWCINV}}$</td>
<td>0.660</td>
<td>7.93</td>
</tr>
<tr>
<td>$\gamma_{\text{ALT,SWC}}$</td>
<td>-0.282</td>
<td>-4.51</td>
</tr>
<tr>
<td>$\gamma_{\text{VOLSLS}}$</td>
<td>-0.045</td>
<td>-2.07</td>
</tr>
<tr>
<td>$\gamma_{\text{VOILEMPL}}$</td>
<td>0.138</td>
<td>3.03</td>
</tr>
<tr>
<td>$\gamma_{\text{INV,WITH}}$</td>
<td>0.118</td>
<td>2.65</td>
</tr>
<tr>
<td>$\gamma_{\text{INV,OPEN}}$</td>
<td>-0.050</td>
<td>-2.52</td>
</tr>
<tr>
<td>$\gamma_{\text{INVRIVAL}}$</td>
<td>-0.131</td>
<td>-2.90</td>
</tr>
<tr>
<td>$\gamma_{\text{SWCOPEN}}$</td>
<td>0.010</td>
<td>0.49</td>
</tr>
</tbody>
</table>

Fit

- Chi-Square/df/p-value: .383/280/0
- RMSEA<sup>c</sup>: .040
- Comparative Fit Index<sup>d</sup>: .976
- GFI/AGFI<sup>e</sup>: .878/.847

Squared Multiple Correlations:

<table>
<thead>
<tr>
<th>SAT</th>
<th>ALT</th>
<th>INV</th>
<th>SWC</th>
<th>VOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>.43</td>
<td>.32</td>
<td>.20</td>
<td>.29</td>
<td>.03</td>
</tr>
</tbody>
</table>

---

<sup>a</sup> Maximum likelihood.

<sup>b</sup> $\gamma_{\text{VOLINV}}$ is the effect of INV on VOI.

<sup>c</sup> Root Mean Square Error of Approximation—.05 or less suggests close fit, .051-.08 suggests acceptable fit (Brown and Cudeck 1993; Jöreskog 1993).

<sup>e</sup> .90 or higher suggests acceptable fit (McClelland and Judd 1993).

<sup>d</sup> GFI and AGFI may be inappropriate for assessing fit in larger models (Anderson and Gerbing 1984).
Table 5--TRIMMED FIGURE 1 STRUCTURAL MODEL ESTIMATION RESULTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>( \beta_{\text{VOI,INV}} )</td>
<td>0.164</td>
<td>2.28</td>
</tr>
<tr>
<td>( \beta_{\text{SAT,VOI}} )</td>
<td>0.229</td>
<td>3.76</td>
</tr>
<tr>
<td>( \beta_{\text{SAT,ALT}} )</td>
<td>-0.516</td>
<td>-8.37</td>
</tr>
<tr>
<td>( \beta_{\text{ALT,SWC}} )</td>
<td>-0.342</td>
<td>-4.89</td>
</tr>
<tr>
<td>( \beta_{\text{INV,SAT}} )</td>
<td>0.236</td>
<td>3.28</td>
</tr>
<tr>
<td>( \beta_{\text{INV,WITH}} )</td>
<td>0.186</td>
<td>2.67</td>
</tr>
<tr>
<td>( \beta_{\text{SWC,INV}} )</td>
<td>0.509</td>
<td>7.74</td>
</tr>
<tr>
<td>( \beta_{\text{VOLEMP}} )</td>
<td>0.236</td>
<td>3.28</td>
</tr>
<tr>
<td>( \beta_{\text{VOLSLS}} )</td>
<td>-0.156</td>
<td>-2.16</td>
</tr>
<tr>
<td>( \beta_{\text{INV,OPEN}} )</td>
<td>-0.174</td>
<td>-2.50</td>
</tr>
<tr>
<td>( \beta_{\text{INV,RIVAL}} )</td>
<td>-0.189</td>
<td>-2.90</td>
</tr>
<tr>
<td>( \beta_{\text{SWC,OPEN}} )</td>
<td>0.028</td>
<td>0.48</td>
</tr>
</tbody>
</table>

**Fit**

<table>
<thead>
<tr>
<th>Fit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square/df/p-value</td>
<td>384/282/0</td>
</tr>
<tr>
<td>RMSEA (^d)</td>
<td>.040</td>
</tr>
<tr>
<td>Comparative Fit Index (^e)</td>
<td>.976</td>
</tr>
<tr>
<td>GFI/AGFI (^f)</td>
<td>.881/.852</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SAT</th>
<th>VOI</th>
<th>ALT</th>
<th>INV</th>
<th>SWC</th>
</tr>
</thead>
<tbody>
<tr>
<td>.37</td>
<td>.09</td>
<td>.15</td>
<td>.18</td>
<td>.28</td>
</tr>
</tbody>
</table>

Squared Multiple Correlations:

---

\(^a\) Figure 1 model with the nonsignificant bi-directional paths deleted.

\(^b\) Maximum likelihood.

\(^c\) \( \beta_{\text{VOI,INV}} \) is the standardized effect of INV on VOI.

\(^d\) Root Mean Square Error of Approximation--.05 or less suggests close fit, .051-.08 suggests acceptable fit (Brown and Cudeck 1993; Jöreskog 1993).

\(^e\) .90 or higher suggests acceptable fit (McClelland and Judd 1993).

\(^f\) GFI and AGFI may be inappropriate for assessing fit in larger models (Anderson and Gerbing 1984).
Table 6-- TRIMMED MODEL STANDARDIZED TOTAL EFFECTS$^a$$^b$$^c$

<table>
<thead>
<tr>
<th></th>
<th>VOI</th>
<th>SAT</th>
<th>ALT</th>
<th>INV</th>
<th>SWC</th>
<th>SLS</th>
<th>EMPL</th>
<th>WITH</th>
<th>OPEN</th>
<th>RIVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOI</td>
<td>.009</td>
<td>.040</td>
<td>-.020</td>
<td>.169</td>
<td>.007</td>
<td>-.157</td>
<td>.239</td>
<td>.031</td>
<td>-.029</td>
<td>-.031</td>
</tr>
<tr>
<td></td>
<td>(2.02)</td>
<td>(2.07)</td>
<td>(-2.04)</td>
<td>(2.27)</td>
<td>(1.97)</td>
<td>(-2.16)</td>
<td>(3.27)</td>
<td>(1.73)</td>
<td>(-1.68)</td>
<td>(-1.78)</td>
</tr>
<tr>
<td>SAT</td>
<td>.236</td>
<td>.031</td>
<td>-.532</td>
<td>.131</td>
<td>.182</td>
<td>-.036</td>
<td>.056</td>
<td>.024</td>
<td>-.017</td>
<td>-.024</td>
</tr>
<tr>
<td></td>
<td>(3.75)</td>
<td>(3.25)</td>
<td>(-8.28)</td>
<td>(4.23)</td>
<td>(4.33)</td>
<td>(-1.88)</td>
<td>(2.48)</td>
<td>(2.26)</td>
<td>(-1.20)</td>
<td>(-2.39)</td>
</tr>
<tr>
<td>ALT</td>
<td>-.009</td>
<td>-.042</td>
<td>.022</td>
<td>-.180</td>
<td>-.350</td>
<td>.001</td>
<td>-.002</td>
<td>-.033</td>
<td>.021</td>
<td>.033</td>
</tr>
<tr>
<td></td>
<td>(-2.44)</td>
<td>(-3.02)</td>
<td>(-4.29)</td>
<td>(-4.83)</td>
<td>(1.62)</td>
<td>(-1.97)</td>
<td>(-2.27)</td>
<td>(0.86)</td>
<td>(2.40)</td>
<td></td>
</tr>
<tr>
<td>INV</td>
<td>.056</td>
<td>.244</td>
<td>-.126</td>
<td>.031</td>
<td>.043</td>
<td>-.008</td>
<td>.013</td>
<td>.192</td>
<td>-.178</td>
<td>-.190</td>
</tr>
<tr>
<td></td>
<td>(2.57)</td>
<td>(3.21)</td>
<td>(-3.14)</td>
<td>(3.25)</td>
<td>(3.01)</td>
<td>(-1.66)</td>
<td>(2.03)</td>
<td>(2.67)</td>
<td>(-2.49)</td>
<td>(-2.90)</td>
</tr>
<tr>
<td>SWC</td>
<td>.028</td>
<td>.124</td>
<td>-.064</td>
<td>.525</td>
<td>.022</td>
<td>-.004</td>
<td>.006</td>
<td>.098</td>
<td>-.061</td>
<td>-.097</td>
</tr>
<tr>
<td></td>
<td>(2.51)</td>
<td>(3.12)</td>
<td>(-3.07)</td>
<td>(7.66)</td>
<td>(3.02)</td>
<td>(-1.64)</td>
<td>(2.00)</td>
<td>(2.54)</td>
<td>(-0.88)</td>
<td>(-2.72)</td>
</tr>
</tbody>
</table>

$^a$ From the Figure 1 model with the nonsignificant bi-directional paths deleted. The table is read from column to row (e.g., the effect of SAT on VOI is .040, while the effect of VOI on SAT is .236).

$^b$ Stability Index = .427

$^c$ t-values are shown in parentheses.
Figure 1-- *HYPOTHESES *DIRECTIONAL STRUCTURAL MODEL (Simplified)*

\[ \text{SAT} = \text{Satisfaction}, \text{ALT} = \text{Alternative Attractiveness}, \text{INV} = \text{Investment}, \text{SWC} = \text{Switching Cost}, \text{VOI} = \text{Voice}, \text{WITH} = \text{years with Wholesaler}, \text{OPEN} = \text{Years in Business}, \text{EMPL} = \text{Number of Employees}, \text{SLS} = \text{Annual Revenue}, \text{and RIVAL} = \text{Number of Competitors}. \]

The indicator errors (‘s) and structural disturbances (‘s) were uncorrelated, and the exogenous variables (i.e., EMPL, SLS, WITH, RIVAL, and OPEN) were correlated.
RELATIONSHIP COMMITMENT AND OPPORTUNISTIC BEHAVIOR
(presented at the 2002 Summer American Marketing Association Conference)

Abstract

Relationship commitment has received considerable attention in several literatures outside of Marketing. There it is conceptualized as personal or affective commitment (wanting to stay in the relationship), and structural commitment (having to remain in the relationship).

Opportunism (self-interest seeking with deception) was proposed in the markets-versus-hierarchies literature by Williamson (1975) as a macro explanation for backward or forward integration. It has also generated limited theoretical interest, and a modicum of empirical research, at the micro level because it should disappear in relational exchange (it endangers interfirm exchange relationships by increasing economic and social costs in these relationships). However, empirical research disconfirming this proposal has been mixed.

This paper expands the concept of relationship commitment in interfirm relationships, and explores the apparently complex relationships between relationship commitment and opportunism.

Research involving channel relationships has turned from unilateral relationships (i.e., with unbalanced power and dependence), to those that could be termed bilateral. Bilateral relationships have more nearly equal distributions of power and dependence, and they are usually characterized by high relationship quality. Over the course of this research, studies investigated variables characterizing unilateral relationships (e.g., the power and dependency literature-- see Gaski 1984 for a summary), and variables characterizing bilateral relationships (e.g., the relationship literature-- see Weitz and Jap 1995 for a summary). Studies that combine variables characteristic of both aspects of channel relationships, however, have been comparatively rare.

Of interest in the present research because it is an important yet empirically under explored unilateral relationship behavior (Anderson 1988), retailer opportunistic behavior (i.e., self interest maximizing) that is guileful (i.e., deceives the exchange partner) was introduced in the economics literature. There it was termed opportunism and it was used to explain the failure of markets (see Williamson 1975).\(^1\) It is characterized by covert violations of relationship norms and expectations (see Williamson 1975). Despite arguments that it should be comparatively rare (e.g., Hill 1990), it has been self reported in studies channel relationships (see Dwyer and Oh 1987, John 1984, Joshi 1995, Phillips 1982, Ping 1993, and Provan and Skinner 1989).

Interfirm relationship commitment has been conceptualized as an implicit or explicit pledge of relationship continuity (Dwyer, Schurr and Oh 1987). Gundlach et al. (1995) argued that it is evidenced by the magnitude
of inputs to the relationship, affective attachment to the relationship, and the longevity of the relationship.

Relationship commitment has been extensively studied in several literatures. Mowday, Porter and Steers (1982) argued that organizational commitment is characterized by an employee's acceptance of the organization's values, a willingness to exert effort on behalf of this organization, and a desire to remain in the organization. Meyer and Allen (1991) termed this the affective attachment aspect of organizational commitment. They argued that organizational commitment is also evidenced by being aware of the costs of leaving the relationship, and having a moral belief supporting remaining in the relationship.

Johnson (1982) argued that interpersonal commitment was composed of personal commitment and structural commitment. Personal commitment is characterized by satisfaction with the relationship, a moral belief supporting remaining in the relationship, and a contribution to one's identity provided by the relationship. Structural commitment is characterized by many irretrievable investments in the relationship (i.e., those that would be lost if the relationship ended), unattractive alternative relationships, social pressure to remain in the relationship, and awareness of the costs and difficulty of ending the relationship.

Summarizing these arguments, relationship commitment in general should be characterized by wanting to stay in a relationship. This should be characterized by satisfaction, affective attachment, a moral belief that one ought to stay in the relationship, and a contribution to one's identity provided by the relationship. Further, affective attachment should be shown by the acceptance of organizational values, a willingness to exert effort on behalf of the organization, and the desire to remain in the organization.

The appearance of relationship commitment should also be characterized by having to stay in the relationship. This construct, which we will term relationship dependence, should be characterized by unattractive alternatives, many relationship investments that would be lost if the relationship were ended, social pressures, the longevity of the relationship, and awareness of the costs and difficulty of ending the relationship.

In channel relationships relationship dependence should be characterized by other variables, including many inputs to the relationship, and an awareness of the costs and difficulty of establishing a replacement relationship. Further; the perceived magnitude of the time, effort, money, incentives lost, and the risk that would be faced in replacing the relationship should be mobility barriers between the existing and alternative relationships, and thus indicate relationship dependence. These costs include incentives, provided by partner to
continue the relationship, that would be lost. They include the perceived cost to establish a replacement relationship, including the money, time, and effort involved in beginning the replacement relationship. These costs also include the risk that the replacement relationship would turn out to be a poor company with which to do business.

*Combining Relationship Commitment and Opportunism*

Opportunism has been characterized as a natural inclination (Williamson 1975; see John 1984) that was argued to increase with partner firm's relationship dependence (Williamson 1975).\(^3\) Opportunism has been extensively discussed in several literatures. However, most disciplines implicitly assume parties in long term economic exchange relationships do as they promise. Perhaps as a result, opportunism has been the focus of comparatively little empirical research (Anderson 1988). In particular, two empirical studies have investigated opportunism as the focal variable in the interfirm literature.\(^4\) John's (1984) study could be characterized as involving several affective commitment variables, and Provan and Skinner (1989) study could be characterized as investigating several relationship dependence variables.

Authors have argued that opportunism should be attenuated by high relationship quality (e.g., Goldberg 1980) and thus it should be minimal in bilateral relationships. However, empirical studies have not consistently supported these arguments. For example, in John's (1984) study, firms' opportunism was negatively associated with their (positive) affective attitudinal orientation toward the relationship. However, in a study of several responses to relationship dissatisfaction, including opportunism, Ping (1993) reported that firms' satisfaction with their relationship was not associated with their opportunism.

The present research will propose that these inconsistent associations between opportunism and satisfaction-related variables are the result of different levels of alternative relationship attractiveness across the reported studies (i.e., alternative relationship attractiveness is moderating the opportunism-satisfaction relationship). This research will also investigate the complex reality surrounding past proposals involving interfirm opportunism: that personal or affective commitment reduces opportunism, and relationship dependence increases it.

*Antecedents of Opportunism*

*Opportunism and Alternative Unattractiveness*
Authors have argued that firms with unattractive alternative replacement relationships should exhibit reduced opportunism (e.g., Anderson and Weitz 1986, Provan and Skinner 1989, Ping 1993). This association has been inconsistently observed. Firms' opportunism was negatively associated with their alternative unattractiveness in Ping (1993), but firms' opportunism was not associated with availability of alternatives in Provan and Skinner (1989). It is plausible that this association depends on, or is moderated by, different levels of relationship commitment across the two studies. In a committed interfirm relationship, future economic exchanges with partner should be valued highly (Dwyer, Schurr and Oh 1987). Conversely, any potential gains from opportunism should be less attractive to the committed subject firm than the potential of losses that might result if their opportunism were discovered and the relationship were ruined. Increases in alternative unattractiveness should amplify this effect because it makes the committed subject even more dependent on their partner (Emerson 1962, see Anderson and Narus 1984). This should make potential gains from opportunism even less attractive to the subject than the potential losses if their opportunism were discovered and negative sanctions such as relationship termination resulted (Joshi 1995, see Kahneman and Tversky 1979).

Formally, when firms' relationship commitment is high, increased alternative unattractiveness should make them likely to avoid behaviors such as opportunism that might damage or jeopardize the relationship (Provan and Skinner 1989), and (H1a) Alternative unattractiveness is negatively associated with opportunism when relationship commitment is high;

When firms' relationship commitment is low, however, increases in firms' alternative unattractiveness should be viewed negatively by them. Alternative unattractiveness makes it difficult to exit the relationship, which should in turn be interpreted as a threat to freedom (a cost) (see Brehm 1972). Firms with unattractive alternative relationships should be more likely to engage in re-balancing operations to improve their relationship rewards and costs if the interfirm balance of these rewards and costs becomes tipped in partner's favor. Frazier (1983), among others (see Brehm 1972, Walster, Berscheid and Walster 1976), argued that when relationship rewards are tipped in partner's favor, firms may decrease their relationship inputs (a cost) to reduce partner's relationship rewards.

Opportunism could be viewed as a means to improve the balance of rewards and costs in an interfirm relationship in the subject firms' favor. For example, partner firms' relationship costs could be decreased by
shirking relationship responsibilities, or firms' relationship rewards could be increased by overstating the extent of their local difficulties so partner firms provide additional relationship inputs.

Thus, when relationship commitment is low, alternative unattractiveness should be positively associated with firms' balancing operations such as opportunism. Formally, \((H1b): Alternative unattractiveness is positively associated with opportunism when relationship commitment is low.\)

**Opportunism and Relationship Costs**

The cost facets of relationship dependence can be categorized as past costs to establish and build the relationship (i.e., relationship investments, relationship duration, and irretrievable investments), or future costs to end the relationship and establish another (i.e., the costs of ending the relationship, new relationship startup, incentives lost, and new relationship risk). These costs should have associations with firms' opportunism that depend on how these costs are perceived by the firms.

Costs such time, energy, and effort voluntarily invested to establish, build and maintain a relationship, should be negatively associated with opportunism. Costs and investments already voluntarily incurred, especially those that would be lost or obsoleted if the relationship were ended, should be safeguarded. Thus, these costs and investments should decrease the likelihood of opportunism, which risks damaging or losing the relationship. Specifically, past relationship inputs, especially investments of time, effort, and energy, should make the relationship perceptually more valuable (Dwyer, Schurr and Oh 1987; Frazier 1983). When they increase their relationship investments, especially those that would be lost or obsoleted if the relationship were ended, firms should magnify the risks associated with their opportunism in comparison to its rewards (Kahneman and Tversky 1979), and opportunism should be avoided. Thus, as firms' relationship investments, including the duration of the relationship, and irretrievable investments increase, the likelihood of opportunism should decline, and \((H2a): Relationship investments, relationship duration, and irretrievable investments are negatively associated with opportunism.\)

The time, effort, money, incentives lost, and risk firms would incur to end a relationship and establish an alternative replacement relationship, however, should be positively associated with opportunism. These costs that loom in the future and are unavoidable when changing relationships should be viewed negatively because they threaten freedom (Brehm 1972). They should increase the likelihood of opportunism as a way to balance
or discount these unavoidable costs. Costs that would be incurred in the future to end the present relationship, including $i$) money and time required to physically terminate the relationship; and $ii$) lost incentives provided by partner to continue the relationship should be discounted by increased opportunism as a balancing operation. Costs that would be incurred in the future to establish an alternative relationship, including $iii$) money, time, and effort required to start the alternative relationship, and $iv$) the risk of the alternative relationship turning out to be a poor company with which to do business, should also be discounted by increased opportunism as a balancing operation. Thus, as relationship ending, new relationship startup, incentives lost, and new relationship risk costs perceptually increase, firms should seek to discount these costs via opportunism. Formally, $(H2b)$: Relationship ending costs, new relationship startup costs, incentives lost, and new relationship risk are positively associated with opportunism.

Unexplored Antecedents of Opportunism

Opportunism may have several unexpected antecedents. Authors have proposed there are several possible responses to relationship problems (actions or inactions by the partner firm that violate relational norms-- see Kaufmann and Stern 1988) besides leaving the relationship or exiting (Hirschman 1970, Ping 1993). Hirschman (1970) argued that when relationship problems first occur in a (committed) relationship, individuals react first with loyalty rather than simply exiting the relationship. He proposed this loyalty is characterized first by loyal behavior (remaining silent when there were relationship problems, with confidence that things will get better). If these problems persist, then they use voice (constructive attempts by the subject firm to change objectionable relationship conditions) is used, or they exit the relationship.

Loyal Behavior

Loyal behaving subjects are silent when there are relationship problems because they are confident that things will get better (Hirschman 1970). This loyal behavior is characterized by an absence of complaint (Hirschman 1970), the belief that the relationship partner will remedy problems, and that there is no need for the loyal behaving subject to take action when there are relationship problems. Thus when relationship problems occur, loyal behaving firms should be disinclined to engage in actions designed to re-balance their rewards and costs in the relationship because the relationship partner will soon remedy the situation. Thus, as their loyal behavior increases, firms should be increasingly less likely to engage in opportunism, and $(H3)$: Loyal behavior is negatively associated with opportunism.
Voice  Vocal subjects, however, make constructive attempts to change objectionable relationship conditions (Hirschman 1970). This suggests that voice and opportunism behaviors should be unlikely to be emitted jointly because they are dissonant (see Festinger 1954). Voice is aimed at relationship repair, while opportunism, if discovered, risks ruining the relationship. Thus, vocal firms should be unlikely to engage in opportunism, and (H4): Voice is negatively associated with opportunism.

These hypothesized relationships are summarized in Figure 1.

A Study

Conceptual and Operational Definitions

Relationship Commitment  Interfirm relationship commitment was conceptualized above as an implicit or explicit pledge of relationship continuity arising from wanting to stay in a relationship. Recalling that commitment has been argued to be indicated by wanting to stay in a relationship because of satisfaction, affective attachment, a moral belief that one ought to stay in the relationship, and a contribution to one's identity provided by the relationship, interfirm relationship commitment was operationalized as overall satisfaction with the relationship, and affective attachment to it. The facets of interfirm relationship commitment related to relationship commitment arising from a moral belief that a firm should remain in the relationship or the relationship's contribution to a firm's identity were not operationalized in the present study because focus groups with a convenient sample of firms from the study population strongly suggested that moral beliefs and contribution to identity were unlikely to be a basis for relationship commitment in many interfirm relationships.

Affective attachment was argued to be shown by the acceptance of organizational values a willingness to exert effort on behalf of the organization, and the desire to remain in the organization. Because interfirm relationships are more likely to develop norms and expectations (Macneil 1980) than to simply accept existing organizational values, observance of relationship norms and expectations should be more indicative of affective attachment than acceptance of organizational values in interfirm relationships. However, because affective attachment in part involves observing relationship norms and expectations, while opportunism involves deceitful violation of these norms and expectations, their conceptual domains overlap in the area of norms and expectations. As a result, interfirm affective attachment was operationalized in the present study as willingness to exert effort on behalf of the relationship, and desire to remain in the relationship. Observance of relationship
norms and expectations was not operationalized to avoid a domain overlap in the area of norms and expectations, and any attendant distortions of their construct and discriminant validities. In addition, it avoided overstating the association between opportunism and relationship commitment.

These facets of relationship commitment were operationalized using previously developed measures that have shown acceptable psychometric properties. The conceptual domain of overall relationship satisfaction, the global evaluation of relationship fulfillment (Dwyer and Oh 1987), includes the fairness of the supplier, whether or not they are a good company to do business with, and overall satisfaction with the relationship. It was operationalized using a scale developed by Ping (1993), the items of which are shown in Appendix B.

Willingness to exert effort on behalf of the relationship was measured with an existing scale that has previously shown acceptable psychometric properties, minimal neglect of the relationship (whether or not the subject firm will allow the relationship to deteriorate). Firms that are not willing to let their exchange relationship deteriorate should be willing to exert effort on behalf of the relationship to keep it from deteriorating. The conceptual domain of willingness to exert effort on behalf of the relationship/minimal neglect of the relationship includes the degree of caring about the relationship, the willingness to expend effort to maintain or improve the relationship, and whether or not the subject firm will let the relationship deteriorate (Rusbult, Zembrodt and Gunn 1982). Minimal neglect was measured using a scale developed by Ping (1993). The items for this and the other study measures are shown in Appendix B.

Similarly, the desire to remain in the relationship was measured using an existing measure that has previously exhibited acceptable psychometric properties, minimal exiting propensity: whether or not subject firm desires to continue the current relationship. Its conceptual domain includes not intending to engage in, or not engaging in, the activities associated with ending a relationship: thinking of ending the relationship and considering a replacement relationship, looking for a replacement relationship, and the intention to end the relationship. Minimal exiting propensity was measured using a scale developed by Ping (1993).

**Relationship Dependence**  
Relationship dependence as was conceptualized above as the magnitude of mobility barriers between the present relationship and a replacement relationship. It was argued to be characterized by many irretrievable investments in the relationship (i.e., that would be lost if the relationship ended), unattractive alternative relationships, social pressures to remain in the relationship, awareness of the costs and diffi-
culty of ending the relationship, many inputs to the relationship; and awareness of the costs and difficulty of establishing a replacement relationship, incentives provided by partner to continue the relationship that would be lost, the perceived cost to establish a replacement relationship, and the risk that the replacement relationship would turn out to be a poor company with which to do business. We operationalized these facets of relationship dependence with the unattractiveness of the best alternative replacement relationship, the magnitude of inputs to the relationship and the investments in the relationship that would be lost if it were ended, the longevity of the relationship, and the costs and the difficulty of ending the relationship and starting a replacement relationship. The facet of interfirm relationship dependence involving social pressure was not operationalized in the present study because focus groups with a convenient sample of firms from the study population strongly suggested that social pressure was not a basis for relationship dependency in many interfirm relationships.

*Relationship ending cost,* the firm’s costs to end the current relationship, was measured using a new scale which is shown in Appendix B. Its conceptual domain includes the perceived magnitude of the anticipated costs to cancel the relationship, including time, money, and customer goodwill. Its measure development was guided by the switching cost literature (e.g., Porter 1980) and depth interviews with hardware retailers, and it involved a jury of academic experts to judge the resulting items using the above conceptual definition.

The measure for *new relationship startup cost,* the time, money, and effort involved in preparing to use the alternative supplier, was also guided by the switching cost literature and depth interviews, and it utilized item judging by knowledgeable academic colleagues. The domain of new relationship startup cost includes the perceived magnitude of the costs of negotiating with the alternative supplier, changing displays, and setting up and getting ready to use the alternative supplier.

The measures for *incentives lost,* the current supplier’s inducements to continue the relationship that would be lost if the relationship were ended, and *new relationship risk,* the risk that the alternative supplier would turn out to be a poor company with which to do business, were also new measures and were developed as just described. The conceptual domain of incentives lost included the perceived magnitude of the incentives, inducements, and rewards for continuing the relationship that would be lost or forfeited in switching to the alternative supplier. The conceptual domain of new relationship risk included the perceived magnitude of the
risk that the alternative supplier would not perform consistently with expectations, the perceived magnitude of the risks of poor service and performance, and the perceived magnitude of the risk of being a poor company with which to do business.

*Relationship investments*, the costs the firm has incurred to build and maintain the relationship (Lund 1985), was operationalized as the perceived time, effort and energy that have been invested to build and maintain the relationship. *Irretrievable investments*, the relationship investments that would be lost if the relationship were ended, was operationalized as the perceived uniqueness of the relationship investments, and the perception of how much of the investment in the relationship would be lost by changing primary suppliers. These constructs were measured with modifications of scales developed by Ping (1993) that were item judged as described earlier.

*Alternative unattractiveness*, the perceived overall satisfaction available in an alternative replacement relationship, was operationalized as the overall fulfillment, or lack of it, available from the best alternative supplier in comparison to the existing relationship (Rusbult 1980). Its domain includes the perception of whether or not the alternative would be a good company to do business with; its fairness, products, services, and policies; and the anticipated overall satisfaction with the alternative supplier.

*Loyal behavior*, abiding relationship problems in silence with confidence that things will get better (Rusbult, Zembrodt and Gunn 1982), was operationalized as intending not to say anything to the partner firm about relationship problems; intending to overlook, ignore, or disregard relationship problems; and the belief that relationship problems will fix themselves. *Voice*, constructive attempts by the subject firm to change objectionable relationship conditions (Rusbult, Zembrodt and Gunn 1982), was operationalized as intending to discuss relationship problems with the partner firm, intending to suggest changes in the relationship when there are problems, and intending to work with the partner firm to solve mutual problems. Both constructs were measured using measures developed by Ping (1993).

*Opportunism*, self interest seeking with guile (Williamson 1975), was measured using the Dwyer and Oh (1987) opportunism measure. It was operationalized as intending to distort information, intending to fail to fulfill promises, and intending to shirking obligations (John 1984).

*Relationship duration*, the number of years the firm has done business with the supplier, was measured
using a single open-ended question (see Appendix B).

As Figure 1 and the preceding discussion imply, relationship commitment was specified as a second order construct in the present study. Its indicators were the first-order constructs overall relationship satisfaction, minimal neglect, and minimal exiting propensity.

While interfirm relationship dependence could also be specified as a second order construct, as implied by the hypotheses we elected instead to specify its first order constructs as directly associated with opportunism for several reasons, including that it allows the estimation of the path coefficients between these variables and opportunism (which is not possible using a second order construct).

**Sampling** The study population was hardware retailers. They form long-term relationships with a single primary wholesaler for most of their merchandise. The key informant was the store owner, manager, or executive. Depth interviews conducted prior to the study suggested they were quite knowledgeable of the primary wholesaler relationship. These interviews also suggested their sentiments and perceptions were mirrored by other informants in the firms.

Sampling involved systematic random (n-th name) selections of 600 pretest store names and 800 final-test names (with one key informant per store).

**Pretest** The pretest responses (199) were used to evaluate the measures. They were unidimensional using maximum likelihood exploratory factor analysis, except for opportunism which was multidimensional. Reliabilities for these measures, including the F1 factor for opportunism (items 3-8) were above .80. They were judged to be valid (i.e., they were item judged to be content valid; they were correlated with the other study variables in plausible directions, suggesting their construct validity; their average extracted variances (AVE's) were above .50, which suggested convergent validity, and their AVE's were greater than the squared correlations with the other study variables, suggesting discriminant validity (see Fornell and Larker 1981)).

To utilize structural equation analysis, the model-to-data fit for each measure is investigated (see Anderson and Gerbing 1988, Jöreskog 1993), and items are dropped in inconsistent scales until measurement model fit is attained. However, authors have criticized dropping items from psychometrically acceptable (i.e., unidimensional, valid and reliable) measures to attain model fit on the grounds that it impairs content validity (e.g., Cattell 1973, 1978; see Gerbing, Hamilton and Freeman 1994). Cattell (1973) observed that the resulting
measures are typically bloated specific (operationally narrow) instances of the target construct.

It is well known that fit improves by dropping items from a measure. Stated differently, fit declines as items are added to a measure, and Bagozzi and Baumgartner (1994) observed that it is practically impossible to obtain model-to-data fit in a measure with more than 6 items using survey data. Thus, itemizing a latent variable with each of its individual indicators may be inappropriate for a unidimensional measure with more than 6 items in structural equation analysis.

Kenny (1979) may have been aware of these difficulties. He suggested that instead of specifying a latent variable with each of its individual indicators, a single indicator that was the sum of these indicators could be used, as Likert (1932) suggested. Variations of this procedure have been used elsewhere in the social sciences for established (long) multi-item measures (e.g., Heise and Smith-Lovin 1982; James, Mulaik and Brett 1982; and Williams and Hazer 1986), but the procedure is generally unfamiliar to researchers in Marketing. This suggestion has several merits (e.g., it permits the use of larger measures in structural equation analysis; it reduces the size of the input covariance matrix (ICM), which results in more cases per ICM element, and thus it reduces the asymptotic incorrectness of the ICM; and it produces more nearly continuous indicators that better approximate the assumptions underlying structural equation analysis), and the present research uses this summed specification for the latent variables in the Figure 1 model (see Appendix A for details).

Except for irretrievable investments, single construct measurement models for the measures did not adequately fit the data (Dwyer and Oh 1987, John 1984, and Ping 1993 reported similar difficulties with these measures). In the sad process of fitting successive measurement models to determine which items to drop from measures that were nevertheless unidimensional using maximum likelihood exploratory (common) factor analysis (ML EFA), we were unable to determine how much lack of fit was due to the number of items in a measure and how much was due to actual inconsistency in the items. In addition, dropping items to attain model-data fit produced submeasures that were judged to be less rich, to completely unacceptable, on a domain sampling, and thus a content validity basis, when compared with the full measures. As a result, because the full measures were unidimensional using ML EFA (except for opportunism), they were retained for the final test.

**Final-Test** Two hundred ninety-seven responses were usable from the final-test mailing after two postcard follow-ups (a 37% usable response rate).
As before, single construct measurement models for the scales did not adequately fit the data. In addition, we continued to be unable to determine how much lack of fit was due to inconsistency and how much was due to the number of items in each measure. As in the pretest, dropping items to improve fit produced conceptually narrow to unacceptable submeasures based on the full measures' domain sampling. Since the full measures were unidimensional (except for opportunism) using ML EFA, they were summed to estimate the Figure 1 structural equation model.

The eight-item opportunism measure was not unidimensional in the pre- and the final-test (Dwyer and Oh 1987 reported similar problems). Items 3-8 in Appendix B were unidimensional in the final test using ML EFA but their single construct measurement model (see Jöreskog 1993) did not adequately fit the data. As before, we were unable to determine how much lack of fit was due to inconsistency and how much was due to the number of items. Because submeasures that did fit the data were judged to be less content valid than the items 3-8 measure, we also summed items 3-8 for opportunism in the final test.

Relationship commitment, specified as a second order construct with its first order constructs satisfaction, minimal neglect, and minimal exiting, was judged to fit the data using ordered similarity coefficients (see Anderson and Gerbing 1982) (also see Bagozzi 1981 for a discussion of second-order constructs). However, there is no guidance for specifying a second-order construct when it is also involved in an interaction. Primarily to simplify the specification of the interaction, the second-order construct relationship commitment was specified with a single summed indicator that was the sum of the three summed indicators for satisfaction, minimum neglect, and minimum exiting propensity to estimate the structural coefficients in the Figure 1 model (see Bagozzi and Hetherton 1994 for a discussion of this approach).

The interaction between relationship commitment and alternative unattractiveness was specified using a single product indicator as Ping (1995) suggested (see Figure 1).

**Reliability and Validity** The measures had reliabilities ranging from .81 to .97 (see Table 2). They were judged to be content valid (see Appendix B). In addition, each construct was significantly correlated with other constructs in plausible directions, which suggested the construct validity of the study measures (see Table 2). The average variance extracted (AVE) for each measure were above .50 which suggested their convergent validity (Fornell and Larker 1981) (see Table 2). Finally, the AVE's of each pair of constructs exceeded the
square of the correlation between them, which suggested their discriminant validity (Fornell and Larker 1981). The measurement and structural models for Figure 1 were estimated using covariances, LISREL 8, and maximum likelihood, and the results are shown in Tables 1 and 2. Because the measurement and structural models for Figure 1 had latent variables each with a single indicator and were saturated, they each fit the data perfectly.

Results

More than half of the variance in opportunism was explained (see Table 1). The hypothesized relationship commitment and alternative unattractiveness interaction was significant. However, opportunism's associations with the relationship costs were checkered. Opportunism was positively associated with two of the future costs (relationship ending cost and incentives lost), but it was not associated with relationship investments, irretrievable investments, new relationship startup cost, risks, or relationship duration. In addition, opportunism's associations with loyal behavior and voice were positive instead of negative. These unanticipated results will require considerable discussion and interpretation, which begin in the next section.

Estimating the interaction between relationship commitment and alternative unattractiveness required specifying relationship commitment and alternative unattractiveness in the structural model. However, because they were not hypothesized to be directly associated with opportunism, their opportunism path coefficients were constrained to equal zero in estimating the Figure 1 model. This in turn assumed these associations were zero in the population model of Figure 1. To probe this assumption, the Figure 1 model was re-estimated with the opportunism path coefficients from RCOM and ALTU not constrained to equal zero. The alternative unattractiveness-opportunism path was not significant, but the relationship commitment-opportunism path was, and these two associations are also shown in Table 1.

Discussion

The Structure of Relationship Commitment and Relationship Dependency Commitment in an interfirm relationship was argued to be characterized by relationship commitment and relationship dependency. Each of these concepts was argued to have facets that are themselves concepts. This research specified relationship commitment as a second-order construct, which was judged to be psychometrically adequate (i.e., unidimensional, reliable, and valid). This specification had the desirable property of allowing a straightforward specifi-
cation of the RCxALTU interaction. However, RCOM's second-order specification fitting the data suggests that one operationalization or structure of relationship commitment may be as a second order construct composed of satisfaction, willingness to exert effort on behalf of the relationship, and desire to remain in the relationship. In different words, these concepts appear to work together (i.e., are consistent) to create relationship commitment in the present context.

The structure of relationship dependence was unspecified in the Figure 1 model so that associations with opportunism could be observed. However, relationship dependence was multidimensional in the pre- and final tests using maximum likelihood exploratory (common) factor analysis and the indicators (constructs) ALTU, INV, IRINV, START, END, INCENT, RISK, YRS. Nevertheless, a second order construct composed of the costs (INV, IRINV, START, END, INCENT and RISK) was unidimensional, had reliability of .85, and had an average variance extracted of .51. This (second order) construct COST produced a positive association with opportunism ($\beta_{\text{COST}} = .14, t = 2.21$) in a respecification of Figure 1 that combined INV, IRINV, START, END, INCENT and RISK into the second order variable COST. This suggests that relationship dependency may be a complex construct in this context that is characterized by alternative unattractiveness, COST, and relationship duration. In different words, its facets did not vary together in the present study (i.e., they were inconsistent as a second order construct).

Costs and Opportunism  Opportunism was positively associated with two of the interfirm relationship mobility barriers proposed by this research, the cost to end the relationship and the incentives that would be lost in ending the relationship, and COST was positively associated with opportunism. These results suggest the study firms may have compensated for these costs using the balancing mechanism of opportunism. Together this suggests relationship costs increased opportunism in the present study, but not by much. The association between opportunism and COST was weak when compared to relationship commitment (RCOM) and alternative unattractiveness (ALTU) (see Tables 1 and 3). In addition, because they were not significantly associated with opportunism in the present study, the importance of irretrievable investments, new relationship startup cost and risks, relationship investments, and relationship duration may not matter when it comes to opportunism (i.e., at best their effect on opportunism may depend upon the study context).

Holding Opportunism at Bay  Based on the signs of the significant study associations shown in Table 4,
opportunism should be low when relationship commitment (RCOM) and alternative unattractiveness (ALTU) are high, and relationship ending cost (END) and incentives lost (INCENT) are low. Indeed as shown in Column 2 of Table 3, opportunism was lowest when relationship commitment, and alternative unattractiveness were above their study averages, and relationship ending cost and incentives lost were below average. However, because of the interaction between relationship commitment and alternative unattractiveness, the opposite was not true. Opportunism was highest when relationship commitment was below average, but alternative unattractiveness were above average, and relationship ending cost and incentives lost were below average (see Column 2 of Table 3).

Increased relationship commitment was linked with decreased opportunism for all levels of alternative attractiveness in the study except when alternative attractiveness was at its minimum (see Columns 5 and 8 of Table 4). Similarly, reduced alternative unattractiveness was likely to be accompanied by reduced opportunism when relationship commitment was lower (see Columns 1 and 4 of Table 4). These results suggest that opportunism in the study firms was likely to be increased by lack of relationship commitment (see Column 8 of Table 4), and aggravated by high alternative unattractiveness (see the bottom of Columns 4 in Table 4).

Having said that, this research also suggests that relationship quality may not always hold opportunism at bay. The relationship quality variable relationship commitment was negatively associated with opportunism only when alternative unattractiveness was not extremely low (see Column 8 of Table 4). When alternative unattractiveness was extremely low, the relationship quality variable relationship commitment had no association with opportunism (see Column 8 of Table 4).

The interaction between relationship commitment and alternative unattractiveness makes it difficult to say with precision which had the greater effect on opportunism in the study, relationship commitment or variables that characterize relationship dependence. Nevertheless, the Table 1 standardized coefficient of RCOM is much larger than ALTU; but based on Column 8 of Table 4 ALTU should not be ignored. Together relationship commitment and alternative unattractiveness explained 34% of the variance in opportunism while the other variables that characterize relationship dependency explained 7%. Thus, relationship commitment and alternative unattractiveness may jointly matter when it comes to holding interfirm opportunism at bay, but relationship commitment may matter relatively more.
Previous Inconsistent Results The interaction between relationship commitment and alternative unattractiveness may explain the inconsistent reported opportunism associations between satisfaction and alternatives. In the present study when alternative unattractiveness was higher, relationship commitment, and by implication, satisfaction, was negatively associated with opportunism as John (1984) observed (see Columns 5 and 8 of Table 4). However, when alternative unattractiveness was low this association was non significant as Ping (1993) observed (see the bottom of Column 8 in Table 4). Thus, an explanation for the inconsistent associations between opportunism and variables related to satisfaction is that alternative unattractiveness may have been high in John's (1984) study, while it may have been low in Ping's (1993) study.

Similarly, when relationship commitment was very high in the present study, alternative unattractiveness may have been negatively associated with opportunism as Ping (1993) observed (see the top of Columns 1 and 4 of Table 4). When relationship commitment was near the study average, alternative unattractiveness was not associated with opportunism as Provan and Skinner (1989) observed (see Columns 1 and 4 of Table 4). Thus, an explanation for the inconsistent associations between alternative attractiveness and opportunism is satisfaction may have been very high in Ping's (1993) study but lower in Provan and Skinner's (1989) study.

Voice Loyal Behavior and Opportunism The above discussion of variable relationships across studies suggests an interaction (or quadratic) might be responsible for an unanticipated association between two variables (also see Ping 1998 for a summary of arguments for post hoc probing associations using interactions and quadratics). Thus, to probe the unexpectedly positive voice and loyal behavior associations with opportunism, an interaction between relationship commitment and voice (RCxVOI in Table 1), and a quadratic in loyal behavior (LxL in Table 1) were added to the Figure 1 model, to see if nonlinearity in these associations was responsible for the unexpected results. The results were significant, and the coefficients are shown in Table 1.

The voice interaction with relationship commitment suggests the voice association with opportunism was dependent on the level of relationship commitment in the study. The voice opportunism association was positive for most levels of relationship commitment, except for very high relationship commitment, where the opportunism-voice association was negative as hypothesized. This hints that voice may also have been a type of balancing mechanism in the study context, when relationship commitment was very high, but that it is associated with higher opportunism for lower levels of relationship commitment.
The significant quadratic in loyal behavior suggested the opportunism-loyal behavior association was also variable. This association was positive across most of the levels of existing loyal behavior, except when existing loyal behavior was very high, where small changes in loyalty were negatively associated with opportunism. This suggests that most of the retailers in the study that were silent when there were problems in the relationship were also likely to have been opportunistic. Together with the voice-opportunism association these results suggest that for all but the most committed retailers in the study context increases in silence or voice when there were relationship problems were likely to also be accompanied by opportunistic behavior. In turn this suggests that neither voice nor loyal behavior can be used to detect the possibility of opportunism in the study context, and a prudent channel manager is left with maximizing relationship commitment and alternative unattractiveness as the most likely strategy for dealing with opportunism in this context. In addition, because on average, relationship commitment had the larger association with opportunism, and because alternative unattractiveness and relationship commitment were positively correlated in the study (see Table 2), it may be sufficient for the prudent channel manager in this context to maximize relationship commitment.

References


Kenny (1979) suggested an approach that uses reliabilities to determine the loading and measurement error of an indicator that is the sum of items in structural equation analysis. Variations of this approach have been used in the social sciences with established measures that have many items and larger models (e.g., Heise and Smith-Lovin 1982; James, Mulaik and Brett 1982; and Williams and Hazer 1986), but the procedure is generally unfamiliar to researchers in Marketing. This approach has several merits. When averaged, a summed indicator produces more nearly continuous observed data which reduces the (unknown amount of) bias that attends the much criticized use of structural equation analysis with ordinal data (such as that produced by rating scales) (see Jöreskog and Sörbom 1996:239). Summed indicators substantially reduce the size of the input covariance matrix, and thus its asymptotic incorrectness for a given sample size. In different words, this enables the proper use of the smaller samples typical in marketing studies (e.g., 200-300) with larger structural models by improving the ratio of the sample size to the size of the covariance matrix (at 5 items per latent variable, the Figure 1 model would have required over 2500 completed questionnaires to produce at least one case per input covariance matrix element). The use of summed indicators eliminates interpretational confounding by separating measurement issues from model structure in structural equation models (see Anderson and Gerbing 1988 for a consistency-based approach to separating measurement from model structure). Thus, for unsaturated structural models, lack of fit in a summed indicator model unambiguously suggests structural model misspecification, rather than a combination of measurement model difficulties and structural model misspecification. On the negative side, summed indicators are non traditional and not particularly elegant in structural equation analysis. It is assumed that indicators must be tau equivalent to be summed (however, Bagozzi and Heatherton’s (1994) results suggest that structural equation analysis used with reliable measures and survey data is robust to violations of the assumption that items be tau equivalent before summing them); and it is believed that reliability underestimates the loading of the summed item when the factor analytic loadings of the individual items vary widely in size (however, for unidimensional measures with reliabilities of .70 or above and survey data, individual loadings typically vary only a few points).

The present research used summed (then averaged) indicators to specify the Figure 1 model in order to avoid omitting items from unidimensional measures and thus to preserve their content or face validity; to produce at least 2 cases per input covariance element and thus reduce the asymptotic incorrectness of the input covariance matrix; and to provide more nearly continuous indicators that better approximate the assumptions underlying structural equation analysis.

Authors have defined the reliability of an indicator as the square of the coefficient on the path between the indicator and its latent variable (see Bollen 1989). Thus, the loading of an indicator is the square root of its reliability. It is also well known that the measurement error variance, $\theta_X$, of an indicator $X$ is given by

$$\theta_X = \text{Var}(X)(1 - \rho_X),$$

where $\text{Var}(X)$ is the variance of $X$ and $\rho_X$ is the latent variable reliability of $X$.\(^{10}\)

Anderson and Gerbing (1988) pointed out that for unidimensional measures there is little practical difference between coefficient alpha ($\alpha$) and latent variable reliability $\rho$.

Thus, for a single indicator specification of an unobserved construct, its loading is estimated by the square root of its coefficient alpha reliability, and its measurement error variance is estimated by $\text{Var}(X)(1 - \alpha_X)$, where $\alpha_X$ is the coefficient alpha reliability of $X$.\(^{9}\)
Appendix B- Final Test Measures

ALTERNATIVE UNATTRACTIVENESS (ALTU) (All items were reverse coded)
1. All in all, the alternative wholesaler would be ______ fair than/as the current wholesaler is.
   a. Much more  b. Slightly more  c. As  d. Slightly less  e. Much less
2. Overall, the alternative wholesaler’s policies would benefit my company than/as the current wholesaler’s policies.
   a. Much more  b. Slightly more  c. As  d. Slightly less  e. Much less
3. I would be _____ satisfied with the product and service available from the alternative wholesaler than/as the current wholesaler.
   a. Much more  b. Slightly more  c. As  d. Slightly less  e. Much less
4. In general, I would be _____ satisfied with the alternative wholesaler than/as I am with the current wholesaler.
   a. Much more  b. Slightly more  c. As  d. Slightly less  e. Much less
5. Overall, the alternative wholesaler would be a/an _____ company to do business with than/as the current wholesaler.
   a. Much better  b. Slightly better  c. As good  d. Slightly worse  e. Much worse

INCENTIVES LOST (INCENT)
1. Switching to the alternative wholesaler would mean I would lose the current wholesaler’s rewards for continuing the relationship.
2. There are many current wholesaler provided incentives to continue the relationship that I would lose in switching to the alternative wholesaler.
3. The company would forfeit the current wholesaler’s inducements to continue a relationship if I changed to the alternative wholesaler.
4. Changing to the alternative wholesaler would mean that I would lose the incentives the current wholesaler provides for continuing the relationship.
5. If the company changed to be alternative there are many rewards that the current wholesaler provides to continue the relationship that would be lost.

IRRETRIEVABLE INVESTMENTS (IRINV)
1. The company’s investment in the current wholesaler relationship is unique to the relationship.
2. A lot of our investment in the current wholesaler relationship would be lost by changing primary wholesalers.
3. All things considered, the company would lose a lot of our investment by changing primary wholesalers.
4. Much of my investment with the current wholesaler is unique to the relationship.
5. Overall, I would lose a lot of our investment if I changed primary wholesalers.

LOYAL BEHAVIOR (LOY)
1. I will not say anything to my primary wholesaler about mutual problems because they seem to go away by themselves.
2. I disregard problems with my primary wholesaler because they just seem to work themselves out.
3. Problems with my primary wholesaler will often fix themselves.
4. Sometimes I ignore problems with my primary wholesaler.
5. I often overlook problems with my primary wholesaler because they frequently fix themselves.

MINIMAL EXITING PROPENSITY (MINEXP) (All items were reverse coded)
1. Occasionally I will think about ending the business relationship with my primary wholesaler.
2. I am not likely to continue the business relationship with my primary wholesaler.
3. I will probably consider a replacement primary wholesaler in the near future.
4. I am looking at replacement wholesalers.
5. I will consider a replacement wholesaler soon.
6. I will probably stop doing business with my primary wholesaler in the near future.

MINIMAL NEGLECT (MINNEG) (All items were reverse coded)
1. I won’t plan to do anything to improve relations with my primary wholesaler and will expect things will become worse.
2. At times I care very little about what happens to my primary wholesaler as long as I get what I need from them.
3. I have quit caring about my primary wholesaler and will let conditions get worse and worse.
4. I will passively let the relationship with my primary wholesaler slowly deteriorate.
5. If things are not right with my primary wholesaler I sometimes consider letting the relationship die a slow death.

NEW RELATIONSHIP RISK (RISK)
1. In switching to the alternative wholesaler there would be a risk of their poor service.
2. There would be a lot of risk to the company to in switching to the alternative wholesaler.
3. If I switched to the alternative wholesaler there is a chance they would perform poorly.
Appendix B - Final Test Measures in Alphabetical Order (Continued)

4. There is a chance that the alternative wholesaler would turn out to be a poor company to do business with.
5. I am not certain that the alternative wholesaler would perform consistently with my expectations.

NEW RELATIONSHIP STARTUP COST (START)
1. If I changed primary wholesaler I would spend a lot of effort converting the store to use alternative wholesaler.
2. Changing primary wholesalers would require changing many displays.
3. The costs of getting ready to use the alternative wholesaler would probably be high.
4. I would probably have to spend a lot of time and money to negotiate an agreement with the alternative wholesaler.
5. If we changed primary wholesalers we would have to change a lot of our displays.
6. The amount of time, money and effort required to set up for the alternative wholesaler may be considerable.
7. If we changed primary wholesalers there would be many costs involved in getting ready to use them.

OPPORTUNISM (OPP)
*1. I will not volunteer much information regarding my business to my primary wholesaler.
*2. There will be some things I will do only if my primary wholesaler checks up and insists on it.
3. At times I may have to overstate my difficulties in order to get primary wholesaler assistance.
4. Sometimes, I will have to alter the facts slightly in order to get what I need from my primary wholesaler.
5. I may purposefully exaggerate the sales opportunities in my market in order to get additional allowances or assistance from my primary wholesaler.
6. Occasionally I may shrink certain contractual obligations to my primary wholesaler when I see profit opportunities from doing so.
7. I may neglect my program responsibilities when my primary wholesaler is not likely to notice my noncompliance.
8. I may slightly exaggerate the extent of my problems to get what I need from my primary wholesaler.
* Omitted for Figure 1 model estimation because items 1-8 were multidimensional (items 3-8 composed F1).

OVERALL RELATIONSHIP SATISFACTION (SAT)
1. All in all, my primary wholesaler is very fair with me.
2. Overall, my primary wholesaler is a good company to do business with.
3. In general I am pretty satisfied with my relationship with my primary wholesaler.
4. Overall, my primary wholesaler treats me very fairly.
5. All in all, my relationship with my primary wholesaler is very satisfactory.

RELATIONSHIP DURATION (YRS)
1. How many years have you done business with your primary wholesaler? __________

RELATIONSHIP ENDING COST (END)
1. Canceling the current wholesaler relationship would involve considerable expense.
2. Terminating the current wholesaler relationship would probably cost the company time, money and customer goodwill.
3. My costs to stop doing business with the current wholesaler would probably be high.
4. I would probably lose a lot of goodwill in terminating the current wholesaler relationship.
5. The costs involved in exiting the current wholesaler relationship would probably be considerable.

RELATIONSHIP INVESTMENTS (INV)
1. Overall I have invested a lot in the relationship with the current wholesaler.
2. A lot of energy, time and effort have gone into building and maintaining the relationship with the current wholesaler.
3. All things considered the company has put a lot into the relationship with the current wholesaler.
4. I have put a considerable amount of time, effort and energy into building the relationship with the current wholesaler.
5. All things considered the company has invested a lot in the relationship with the current wholesaler.

VOICE (VOI)
1. Occasionally I will suggest changes to my primary wholesaler if there is a mutual problem.
2. If there are problems with my primary wholesaler I will work jointly with them to help improve the situation.
3. I will work with my primary wholesaler to correct any mutual problems.
4. I will try to discuss any primary wholesaler related problems with them.
5. I will cooperatively discuss mutual problems with my primary wholesaler.
The signs on the paths connecting the variables are both the hypothesized and observed associations, unless otherwise indicated by parentheses. NS denotes Not Significant. V indicates the association was nonlinear and thus it was variable. RCOM, ALTU, etc. (see Appendix B) were specified each with a single averaged indicator except for INV, IRINV, and VOI which were specified with multiple indicators. All exogenous variables were intercorrelated, and the measurement errors (ε) were uncorrelated.

RCOM was specified as a second order construct (see p. 12).

Including RCOM and ALTU (see Appendix B) in the model is required in order to estimate the loading and error variance of RCxALTU. Because RCOM and ALTU were not hypothesized to be directly associated with OPP, their paths to OPP were initially constrained to be zero.

Table 1 - Standardized Structural Model Resultsa

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPP</td>
<td>-.98 RCOM - .32 RCxALTU + .16 ALTU - .04 INV - .20 IRINV + .03 START + .28 END</td>
<td>(-4.72) (-2.51) (1.22) (-.33) (-1.20) (0.21) (2.09)</td>
</tr>
<tr>
<td></td>
<td>+ .25 INCENT - .02 RISK + .39 LOY - .18 LxL + .22 VOI - .20 RCxVOI + .001 YRS + ζ (= .15)</td>
<td>(2.98) (-.17) (3.99) (-2.18) (2.10) (-2.39) (0.02)</td>
</tr>
</tbody>
</table>

Squared Multiple Correlation: OPP .591

---

**Figure 1- Structural Model**

---

a The signs on the paths connecting the variables are both the hypothesized and observed associations, unless otherwise indicated by parentheses. NS denotes Not Significant. V indicates the association was nonlinear and thus it was variable. RCOM, ALTU, etc. (see Appendix B) were specified each with a single averaged indicator except for INV, IRINV, and VOI which were specified with multiple indicators. All exogenous variables were intercorrelated, and the measurement errors (ε) were uncorrelated.

b \( rc:au = [(SAT+MINNEG+MINEXP)/3][(a_1+a_2+a_3+a_4+a_5)/5] \), where a's are the indicators of ALTU (see Appendix B). \( \lambda_{rc:au} = \rho_{RCOM}^{1/2}\rho_{ALTU}^{1/2} \) and \( \theta_{rc:au} = \rho_{RCOM}\text{Var}(RCOM) + \rho_{ALTU}\text{Var}(ALTU)\theta_{RCOM} + \theta_{RCOM}\theta_{ALTU} \), where \( \rho \) denotes reliability, \( \theta \) denotes variance of an error term, and Var(\( \varepsilon \)) is the variance of \( \varepsilon \).

c Including RCOM and ALTU (see Appendix B) in the model is required in order to estimate the loading and error variance of RCxALTU. Because RCOM and ALTU were not hypothesized to be directly associated with OPP, their paths to OPP were initially constrained to be zero.

d RCOM was specified as a second order construct (see p. 12).

---

a Final Figure 1 model using maximum likelihood and LISREL 8.

b OPP = Opportunism, etc. (see Appendix B).
Table 2 - Measurement Model Results

Latent Variable Covariances and Correlations,

<table>
<thead>
<tr>
<th>LATENT VARIABLE</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>Reliab. AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALTU</td>
<td>.65</td>
<td>.25</td>
<td>.22</td>
<td>.28</td>
<td>.41</td>
<td>.72</td>
<td>-.44</td>
<td>.33</td>
<td>.39</td>
<td>.16</td>
<td>-.01</td>
<td>.16</td>
<td>-.04</td>
<td>-.01</td>
<td>.33</td>
<td>.80</td>
<td>.49</td>
<td>.62</td>
<td>.93</td>
</tr>
<tr>
<td>START</td>
<td>.19</td>
<td>.90</td>
<td>.75</td>
<td>.36</td>
<td>.37</td>
<td>.23</td>
<td>.03</td>
<td>.56</td>
<td>.76</td>
<td>.02</td>
<td>-.03</td>
<td>.19</td>
<td>.09</td>
<td>.07</td>
<td>.03</td>
<td>.18</td>
<td>.20</td>
<td>.17</td>
<td>.93</td>
</tr>
<tr>
<td>END</td>
<td>.16</td>
<td>.64</td>
<td>.81</td>
<td>.38</td>
<td>.44</td>
<td>.19</td>
<td>.07</td>
<td>.56</td>
<td>.77</td>
<td>.04</td>
<td>-.04</td>
<td>.18</td>
<td>.09</td>
<td>.07</td>
<td>.03</td>
<td>.16</td>
<td>.15</td>
<td>.16</td>
<td>.90</td>
</tr>
<tr>
<td>INCENT</td>
<td>.19</td>
<td>.29</td>
<td>.29</td>
<td>.72</td>
<td>.27</td>
<td>.30</td>
<td>-.02</td>
<td>.46</td>
<td>.48</td>
<td>-.03</td>
<td>-.09</td>
<td>.14</td>
<td>-.01</td>
<td>-.02</td>
<td>.00</td>
<td>.28</td>
<td>.22</td>
<td>.22</td>
<td>.92</td>
</tr>
<tr>
<td>RISK</td>
<td>.30</td>
<td>.32</td>
<td>.36</td>
<td>.21</td>
<td>.83</td>
<td>-.24</td>
<td>.10</td>
<td>.36</td>
<td>.61</td>
<td>.01</td>
<td>.04</td>
<td>.13</td>
<td>-.04</td>
<td>.05</td>
<td>.05</td>
<td>.20</td>
<td>.23</td>
<td>.17</td>
<td>.93</td>
</tr>
<tr>
<td>RCOM</td>
<td>.35</td>
<td>.13</td>
<td>.10</td>
<td>.15</td>
<td>.13</td>
<td>.36</td>
<td>-.59</td>
<td>.42</td>
<td>.30</td>
<td>.14</td>
<td>-.04</td>
<td>.40</td>
<td>-.02</td>
<td>.10</td>
<td>.56</td>
<td>.94</td>
<td>.95</td>
<td>.99</td>
<td>.81</td>
</tr>
<tr>
<td>RCxAU</td>
<td>-.25</td>
<td>-.02</td>
<td>.04</td>
<td>-.01</td>
<td>.06</td>
<td>-.25</td>
<td>.51</td>
<td>.03</td>
<td>.01</td>
<td>-.10</td>
<td>-.10</td>
<td>-.01</td>
<td>-.03</td>
<td>.23</td>
<td>.12</td>
<td>-.50</td>
<td>-.38</td>
<td>-.52</td>
<td>.86</td>
</tr>
<tr>
<td>INV</td>
<td>.20</td>
<td>.40</td>
<td>.38</td>
<td>.29</td>
<td>.24</td>
<td>.19</td>
<td>.01</td>
<td>.55</td>
<td>.62</td>
<td>.12</td>
<td>-.02</td>
<td>.32</td>
<td>.20</td>
<td>-.09</td>
<td>-.23</td>
<td>.41</td>
<td>.34</td>
<td>.28</td>
<td>.92</td>
</tr>
<tr>
<td>IRINV</td>
<td>.30</td>
<td>.70</td>
<td>.67</td>
<td>.40</td>
<td>.54</td>
<td>.17</td>
<td>-.01</td>
<td>.45</td>
<td>.94</td>
<td>.09</td>
<td>.10</td>
<td>.20</td>
<td>.11</td>
<td>.08</td>
<td>.06</td>
<td>.28</td>
<td>.22</td>
<td>.21</td>
<td>.95</td>
</tr>
<tr>
<td>YRS</td>
<td>1.59</td>
<td>.27</td>
<td>.46</td>
<td>-.30</td>
<td>.14</td>
<td>1.05</td>
<td>-.85</td>
<td>1.12</td>
<td>1.02</td>
<td>1.48</td>
<td>2.24</td>
<td>.08</td>
<td>.01</td>
<td>.03</td>
<td>-.07</td>
<td>.10</td>
<td>.12</td>
<td>.12</td>
<td>---</td>
</tr>
<tr>
<td>LOY</td>
<td>-.01</td>
<td>-.02</td>
<td>-.03</td>
<td>-.05</td>
<td>.02</td>
<td>-.02</td>
<td>-.05</td>
<td>.01</td>
<td>.07</td>
<td>.68</td>
<td>.51</td>
<td>-.38</td>
<td>.44</td>
<td>-.16</td>
<td>.27</td>
<td>.00</td>
<td>-.14</td>
<td>.01</td>
<td>.86</td>
</tr>
<tr>
<td>VOI</td>
<td>.05</td>
<td>.07</td>
<td>.06</td>
<td>.04</td>
<td>.05</td>
<td>.09</td>
<td>.00</td>
<td>.09</td>
<td>.07</td>
<td>.04</td>
<td>-.10</td>
<td>.15</td>
<td>.06</td>
<td>.46</td>
<td>-.33</td>
<td>.32</td>
<td>.43</td>
<td>.23</td>
<td>.91</td>
</tr>
<tr>
<td>RCxVOI</td>
<td>.00</td>
<td>.02</td>
<td>.01</td>
<td>.00</td>
<td>.01</td>
<td>.01</td>
<td>.04</td>
<td>.01</td>
<td>.02</td>
<td>-.02</td>
<td>-.03</td>
<td>.04</td>
<td>.00</td>
<td>.05</td>
<td>-.34</td>
<td>.00</td>
<td>.10</td>
<td>.12</td>
<td>.89</td>
</tr>
<tr>
<td>OPP</td>
<td>-.16</td>
<td>-.02</td>
<td>.01</td>
<td>-.03</td>
<td>-.01</td>
<td>-.02</td>
<td>.12</td>
<td>.09</td>
<td>.34</td>
<td>.26</td>
<td>-.02</td>
<td>.69</td>
<td>.00</td>
<td>-.01</td>
<td>-.04</td>
<td>.06</td>
<td>.05</td>
<td>.87</td>
<td>.74</td>
</tr>
<tr>
<td>SAT</td>
<td>.31</td>
<td>.11</td>
<td>.09</td>
<td>.15</td>
<td>.12</td>
<td>.36</td>
<td>-.23</td>
<td>.19</td>
<td>.18</td>
<td>.78</td>
<td>.00</td>
<td>.08</td>
<td>-.02</td>
<td>.00</td>
<td>-.11</td>
<td>.41</td>
<td>.54</td>
<td>.68</td>
<td>.94</td>
</tr>
<tr>
<td>MINEG</td>
<td>.23</td>
<td>.11</td>
<td>.08</td>
<td>.11</td>
<td>.13</td>
<td>.34</td>
<td>-.16</td>
<td>.15</td>
<td>.13</td>
<td>.90</td>
<td>-.06</td>
<td>.10</td>
<td>.03</td>
<td>.01</td>
<td>-.22</td>
<td>.21</td>
<td>.36</td>
<td>.70</td>
<td>.92</td>
</tr>
<tr>
<td>MINEXP</td>
<td>.44</td>
<td>.15</td>
<td>.12</td>
<td>.17</td>
<td>.13</td>
<td>.55</td>
<td>-.33</td>
<td>.18</td>
<td>.18</td>
<td>1.30</td>
<td>.01</td>
<td>.08</td>
<td>.04</td>
<td>.03</td>
<td>-.26</td>
<td>.38</td>
<td>.37</td>
<td>.78</td>
<td>.97</td>
</tr>
<tr>
<td>AVE</td>
<td>.69</td>
<td>.65</td>
<td>.65</td>
<td>.68</td>
<td>.72</td>
<td>.62</td>
<td>.72</td>
<td>.65</td>
<td>.79</td>
<td>---</td>
<td>.57</td>
<td>.62</td>
<td>.74</td>
<td>.61</td>
<td>.57</td>
<td>.70</td>
<td>.63</td>
<td>.76</td>
<td>---</td>
</tr>
</tbody>
</table>

Notes:

- Maximum likelihood using LISREL 8.
- Covariances on and below the diagonal, correlations above.
- INV = Relationship Investments, etc. (see Appendix B).

Table 3 - Percentages of Study Firms Reporting They Intended to Be Opportunistic

<table>
<thead>
<tr>
<th>END and INCENT below the study average:</th>
<th>END and INCENT below the study average:</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALTU</td>
<td>ALTU</td>
</tr>
<tr>
<td>Low(^a)</td>
<td>Low(^a)</td>
</tr>
<tr>
<td>Low(^b)</td>
<td>50%</td>
</tr>
<tr>
<td>High(^a)</td>
<td>40%</td>
</tr>
<tr>
<td>RCOM</td>
<td>RCOM</td>
</tr>
<tr>
<td>High(^a)</td>
<td>High(^a)</td>
</tr>
<tr>
<td>Low(^a)</td>
<td>54%</td>
</tr>
<tr>
<td>High(^a)</td>
<td>35%</td>
</tr>
</tbody>
</table>

Notes:

- Below or above the study average for the variable.
- The table is read as follows: 50% of the firms with low (below average) ALTU and RCOM were neutral, agreed, or strongly agreed they intended to be opportunistic, 63% of the firms with high (above average) ALTU and low RCOM reported the same thing, etc.
Table 4 - Unstandardized Opportunism (OPP) Associations with Relationship Commitment (RCOM) and Alternative Unattractiveness (ALTU)

<table>
<thead>
<tr>
<th>ALTU-OPP Association</th>
<th>RCOM-OPP Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderated by RCOM</td>
<td>Moderated by ALTU</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ALTU Level</th>
<th>RCOM Coefficient</th>
<th>SE of ALTU</th>
<th>t-value</th>
<th>RCOM Coefficient</th>
<th>SE of ALTU</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>-0.15</td>
<td>0.12</td>
<td>-1.23</td>
<td>-1.41</td>
<td>0.35</td>
<td>-4.02</td>
</tr>
<tr>
<td>4.01</td>
<td>0.12</td>
<td>0.10</td>
<td>1.22</td>
<td>4</td>
<td>0.26</td>
<td>-4.46</td>
</tr>
<tr>
<td>4</td>
<td>0.12</td>
<td>0.10</td>
<td>1.25</td>
<td>3.49</td>
<td>0.21</td>
<td>-4.73</td>
</tr>
<tr>
<td>3</td>
<td>0.40</td>
<td>0.17</td>
<td>2.37</td>
<td>3</td>
<td>0.18</td>
<td>-4.93</td>
</tr>
<tr>
<td>2</td>
<td>0.68</td>
<td>0.27</td>
<td>2.53</td>
<td>2</td>
<td>0.14</td>
<td>-4.13</td>
</tr>
<tr>
<td>1.29</td>
<td>0.87</td>
<td>0.34</td>
<td>2.56</td>
<td>1</td>
<td>0.18</td>
<td>-1.69</td>
</tr>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
<td>(7)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Column Number</th>
</tr>
</thead>
</table>

a The table displays the variable association of RCOM and ALTU with opportunism OPP. When the existing level of RCOM was low in column 1, small changes in ALTU were positively associated with OPP (see column 2). At higher levels of RCOM however, ALTU was less strongly associated with OPP, until for RCOM higher than 3, the association was nonsignificant as Provan and Skinner (1989) reported (see column 4). When RCOM was very high, ALTU was negatively associated with OPP as Ping (1993) reported (although in the present study this association was not significant for very high RCOM).

b The value of RCOM ranged from 1.29 (= low relationship commitment) to 5 in the study.

c The coefficient of ALTU is determined by (.121 -.276RCOM)ALTU with RCOM mean centered. E.g., when RCOM = 1.29 the coefficient of ALTU is .121 -.276*(1.29 - 4.01) = .87.

d The Standard Error of the ALTU coefficient is given by

\[
\frac{\% \text{ Var}(b_{\text{ALTU}} + b_{\text{RCOM}})}{\% \text{ Var}(b_{\text{ALTU}}) + \text{Var}(b_{\text{RCOM}}) + 2\text{RCOM Cov}(b_{\text{ALTU}}, b_{\text{RCOM}})}.
\]

e The table displays the observed joint association of RCOM and ALTU with OPP. When ALTU was low in column 5, the RCOM association with OPP was not significant as Ping's (1993) satisfaction-opportunism association would imply (see column 8). However as ALTU increased, RCOM's association with OPP strengthened, until it was negatively associated with OPP as John's (1984) results suggested.

f The value of ALTU ranged from 1 (= low alternative unattractiveness) to 5 in the study.

g The unstandardized coefficient of RCOM is determined by (-.996 -.276ALTU)RCOM with ALTU mean centered. E.g., when ALTU = 1 the coefficient of RCOM is -.996 -.276*(1 - 3.49) = -.31.

h The Standard Error of the RCOM coefficient is given by

\[
\frac{\% \text{ Var}(b_{\text{RCOM}} + b_{\text{RCOMALTU}})}{\% \text{ Var}(b_{\text{RCOM}}) + \text{ALTU}^2\text{Var}(b_{\text{RCOMALTU}}) + 2\text{ALTUCov}(b_{\text{RCOM}}, b_{\text{RCOMALTU}})},
\]

i Mean value in the study.
Endnotes

1. The term opportunism has multiple meanings, even in the economic literature. In the present paper opportunism is used to signify covert self interest seeking at the expense of the relationship. Examples include distorting or withholding important information from the relationship partner firm, reinterpreting implicit or explicit contract provisions in the opportunistic firm's favor, or shirking important interfirm relationship obligations (Anderson and Weitz 1986). Other examples include misrepresenting information and intentions to the relationship partner firm, and over-stating unfavorable market conditions to the partner firm (see Anderson 1988). Thus it is important at the micro or individual relationship level because it raises economic and social costs in the interfirm exchange relationship.

2. Johnson (1982) argued the appearance of commitment is shown by having to stay in a relationship because of what he termed structural commitment. In the present research we will use the term structural commitment for Johnson's relationship dependence because use of the term commitment in this context seems inappropriate.

3. Specifically, a firm's opportunism is argued to be likely to increase with partner firm's declining alternative relationships and increasing transaction- or relationship-specific investments.

4. Other interfirm studies have involved opportunism peripherally. Ping (1993) investigated opportunism as one of five responses to relationship dissatisfaction. Other such interfirm studies include Dwyer and Oh (1987), and Gundlach, Achrol and Mentzer (1995).

5. The average duration of the relationship between retailers and their primary wholesalers in the sample was 13.4 years, with a standard deviation of 12.3 years. Nearly twenty percent of these firms had done business with their primary wholesaler for twenty years or more.

6. Curiously, a Figure 1 model estimated using (unsummed) consistent submeasures identified by dropping items from the Appendix B measures produced results that were interpretationally equivalent to those shown in the tables.

7. Because satisfaction minimum neglect and minimum exiting were specified with a single summed indicator each, the second order measurement model was exactly identified and thus fit the data perfectly.

8. The squared correlations for the indicators of RCOM (i.e., SAT, MINNEG and MINEXP) exceeded the Average Variance Extracted for RCOM (see Table 2). While this suggests these variables were indistinct from RCOM, this is actually desirable for indicators (i.e., SAT, MINNEG and MINEXP) of a construct (i.e., RCOM).

9. Intrepretational confounding in structural equation models was defined as the effect of model structure upon the measurement of model constructs, and thus its effect on the empirical meaning of the constructs in a model (see Burt 1976 and Bagozzi 1980). It can also be viewed as an effect of measurement on the coefficient estimates in a structural model-- changes in itemization can produce changes in coefficient estimates (see Anderson and Gerbing 1988).

10. Latent variable reliability $\rho_X$ of the latent variable $X$ with $n$ indicators $x_i$ is given by

$$\rho_X = \frac{\Lambda_X \text{Var}(X)}{\theta_X \text{Var}(X) + \text{Var}(X)}$$

where $\Lambda_X = \lambda_{x_1} + \lambda_{x_2} + \ldots + \lambda_{x_n}$, $\theta_X = \text{Var}(\varepsilon_{x_1}) + \text{Var}(\varepsilon_{x_2}) + \ldots + \text{Var}(\varepsilon_{x_n})$, and Var($X$) is the dissattenuated or measurement model variance of $X$ (Werts, Linn and Jöreskog 1974).
TAKING ANOTHER LOOK AT ORGANIZATIONAL COMMITMENT

Robert A. Ping, Jr.
Associate Professor of Marketing
College of Business Administration
Wright State University
Dayton, OH 45435
TAKING ANOTHER LOOK AT ORGANIZATIONAL COMMITMENT

Abstract

This research suggests there is more to learn about salesperson organizational commitment. It proposes novel antecedents and consequences of organizational commitment. The empirical results shed additional light on the nature of organizational commitment in salespersons. The paper concludes with implications that may of interest to sales managers.

Organizational commitment has been studied extensively both in the personal selling literature and in the employee relations literature (see Brown and Peterson 1993, and Ko, Price and Mueller 1997). It has recently been the subject of renewed interest. One result has been its reconceptualization as an aspect of relationship commitment which is composed of affective commitment or attachment to the employment relationship (i.e., liking the relationship and wanting to remain in it), normative commitment to the relationship (i.e., remaining in it because one ought to), and structural commitment (e.g., remaining in the relationship because there is no alternative, etc.) (see Allen and Mayer 1990). This research focuses on affective commitment, termed affective organizational commitment or simply organizational commitment in this research to be consistent with its historic label (e.g., Porter, Steers, Mowday and Boulian 1974), but the research will return to relationship commitment (i.e., organizational or affective commitment, plus structural commitment, etc.) in the Results and Discussion section.

Affective organizational commitment is believed to have the relationship quality antecedent "overall satisfaction with the relationship." This empirical results of this research reveal the linkage between these two variables is more complex than previous research has suggested. The present research proposes that organizational commitment also has the uninvestigated relationship quality antecedents procedural justice (fair treatment regarding policies and procedures) and goal congruency (shared goals and objectives).

Organizational commitment has been strongly associated with the consequent employee behavior exiting. This research suggests that it also has the uninvestigated consequents employee perceptions of the attractiveness of alternative relationships, and employee voice (constructive attempts to change objectionable relationship conditions). The balance of the paper describes a test of these proposed
relationships using a nationwide survey of salespersons and Kenny’s (1979) procedure for structural equation analysis, and it concludes with a discussion of the implications of this research.

**Hypotheses**

**Satisfaction, Organizational Commitment and Exiting**  Consistent with previous conceptual and empirical research, overall relationship *satisfaction* should be positively associated with *organizational commitment* for salespersons, and *organizational commitment* should be negatively associated with *exiting* (see Brown and Peterson 1993 for a summary).

Although salesperson *satisfaction* has been observed to be negatively associated with *exiting* when organizational commitment is not measured (e.g., Netemeyer, Johnson and Burton 1990), based on Williams and Hazer’s 1986 and other’s studies (e.g., Davy, Kinicki and Scheck 1991) the satisfaction-exiting association should be mediated by organizational commitment, and thus satisfaction should not be directly associated with exiting when organizational commitment is measured (however see Sager 1994). This is consistent with Rosse and Miller’s (1984) arguments that dissatisfied employees first withdraw emotionally before they withdraw physically.

**Goal Congruence**  Salespersons’ perceptions that they and their firm have similar goals and objectives, or *congruent goals*, should be positively associated with *organizational commitment*. Agency theory predicts that principals (e.g., firms) and agents (e.g., salespersons) should have divergent goals (e.g., the firm maximizes profit while the salesperson maximizes personal income) (see Eisenhardt 1985). To the extent the organization’s goals and objectives approximate those of the individual (e.g., via profit sharing), the individual should be attracted to the organization (Byrne 1969). Over time, sharing similar goals and objectives should be rewarding to the individual. These rewards should strengthen the individual’s identification with the organization, and they should increase an individual’s efforts to maintain and build the relationship, which captures Mowday, Steers and Porter’s (1979) definition of organizational commitment (p. 226).

*Satisfaction* should be positively associated with *goal congruence*. As overall satisfaction with the relationship increases, the relationship should become more attractive and an individual should be more likely to conform to the goals and objectives of the group (Festinger 1954).

**Procedural Justice**  *Procedural justice*, the overall evaluation of company policy and procedure fairness, their enactment, and treatment of employees, should be positively associated with *organizational*
commitment for the same reasons as goal congruence: Procedural justice is rewarding and these rewards should strengthen identification with the organization, including its goals and objectives.

Procedural justice should also be positively associated with goal congruence for the same reasons as satisfaction: procedural justice should make the relationship more attractive and an individual should be more likely to conform to the goals and objectives of the group.

Alternative Attractiveness Alternative attractiveness should be negatively associated with organizational commitment. While it seems plausible that unattractive alternative employment relationships would increase affective organizational commitment, Rusbult and Buunk (1993) argue that the linkage between these two variables works in reverse: They argue affective relationship commitment actually decreases the attractiveness of alternative relationships, through a process they term discounting, which reduces cognitive dissonance (Festinger 1957).

Consistent with previous conceptual and empirical research, alternative attractiveness should be negatively associated with exiting (e.g., Ko, Price and Mueller 1997). Further, switching cost should be negatively associated with alternative attractiveness because increased switching cost makes the alternative relationship more costly to attain, and thus makes it less attractive.

Voice Organizational commitment should be positively associated with voice, constructive attempts to change objectionable relationship conditions. As organizational commitment increases, the relationship becomes more valuable, and when the inevitable relationship problems occur, the individual should be more likely to take positive action to remedy the situation (see Hirschman 1970).

Previous conceptual and empirical research suggests that switching cost should be negatively associated with exiting (see Ping 1993).

These hypothesized relationships are summarized in Figure 1.

Method

Measures versus Model Fit When using structural equation analysis, it is customary to delete items from measures specified as unidimensional to attain or improve measurement model-to-data fit. This separates measurement from structure in the structural model and thereby minimizes interpretational confounding (Burt 1976) (see Anderson and Gerbing 1988). Further, many substantive researchers appear to believe that multi-item measures that are unidimensional in exploratory factor analysis are psychometrically unacceptable if they do not fit the data in a confirmatory factor model. There are even
suggested procedures that increase the efficiency and effectiveness of this activity (e.g., Anderson and Gerbing 1982:454, Jöreskog 1993, Kano and Ihara 1994, and Ping 1998; see Dwyer and Oh 1987, Gerbing and Anderson 1988, and Kumar and Dillon 1987).

Nevertheless, authors have warned against deleting items to attain model-to-data fit in a unidimensionally specified measurement model (e.g., Cattell 1973, 1978). The resulting measure may no longer adequately sample the domain of the target construct (e.g., Cattell 1973 noted the items in such scales are often trivial restatements of each other, and termed the narrow content of these items “bloated specific.”

It is well known that lack of fit in measurement and structural models may be an artifact of the comparatively large sample sizes required in structural equation analysis (see Hoelter 1983). Lack of fit in structural equation analysis also may be an artifact of many constructs in a structural models (see Anderson and Gerbing 1984). Lack of fit in measurement models may be an artifact of having more than 6 items in a measure (rather than an indication of lack of unidimensionality in the Anderson and Gerbing 1988 sense-- see Bagozzi and Heatherton 1994:43; also see Anderson and Gerbing 1984). Thus for measures that are unidimensional in an exploratory (common) factor analysis, deleting items to attain confirmatory model-to-data fit may not be more desirable than using the full measure, especially an older well-established measure developed before structural equation analysis became popular.

Fortunately, there is an alternative to deleting items to be able to use structural equation analysis. Kenny (1979) suggested a structural equation analysis procedure that rigidly separates measurement from structure without the potential for measurement model fit limiting the number of items in a measure. His procedure uses reliability to specify the loading, 8 (i.e., 8 = %, where Δ denotes reliability), and the measurement error variance, 2, (i.e., 2, = Variance(X)(1 - Δ) of a single summed indicator of a unidimensional construct X. Variations of this procedure have been used elsewhere in the social sciences (see for example Heise and Smith-Lovin 1982; James, Mulaik and Brett 1982; and Williams and Hazer 1986), but the procedure is unfamiliar to marketers. Thus, this research breaks with convention by arguing that unidimensional scales should not always have items deleted at the expense of content validity simply to improve model-data fit when Kenny (1979) has provided a reasonable alternative.

**Measures** Satisfaction, the global evaluation of relationship fulfillment, was initially measured using several scales (one due to Bagozzi 1980a, and one adapted from a measure developed by Ping
1993). Based on results from pretests using scenario analysis the Ping 1993 measure was selected for the final test (see Table 4 for an example item). While this measure was unidimensional using exploratory (common) factor analysis and the final test data, its single construct measurement model did not fit the data acceptably because the measure had 8 items ($\chi^2/df/p$-value $= 104/20/0$, GFI $= .82$, AGFI $= .69$, CFI $= .92$, and RMSEA $= .17$). The customary approach of deleting items to obtain acceptable model-to-data fit required removing three items. However, the resulting 5-item measure was judged to be substantially less content valid than the full eight item measure. As a result, the full 8 item Satisfaction measure and the above Kenny procedure were used to estimate the Figure 1 model.

Procedural justice, the overall evaluation of company policy and procedure fairness, their enactment, and treatment of employees, was measured using a scale developed for this research. Measure development was guided by the procedural justice literature (e.g., Tyler and Bies 1990). It was developed using focus groups of salespersons and a jury of academic experts to judge the resulting items using the conceptual definition, and resulted in thirty-eight items. Subsequently, scenario analyses suggested that the 38-item measure was multidimensional, and items were omitted using exploratory maximum likelihood common factor analysis (EML-CFA) to produce a unidimensional final-test measure containing eighteen items. With the final-test data the procedural justice measure was unidimensional using EML-CFA, but because the measure contained eighteen items confirmatory model fit was impossible. The largest subset of items that did fit the data omitted 13 items and produced a measure that was judged to no longer content valid. Thus, the full eighteen item Procedural Justice measure was used with the Kenny (1979) procedure to estimate the Figure 1 model.

Other study measures required item deletion to attain model fit, but the submeasures that fit the data were judged less content valid than the original full measures. As a result, other study measures utilized the Kenny procedure to estimate Figure 1.

For example, goal congruency, the perception that the company and salespeople have the same goals and objectives, was measured using a scale developed by Anderson (1988). While unidimensional using EML-CFA, it did not fit the data in a single construct measurement model, and the full measure was used.

Organizational commitment, an individual’s organizational identification and involvement, was measured using a scale developed by Mowday, Steers and Porter (1979). It was multidimensional using
EML-CFA in the final test. However, because it is an established measure and we wished to preserve its content validity, it was specified as a second-order construct in Figure 1 as Gerbing, Hamilton and Freeman (1994:574) suggested.

Measures for alternative attractiveness, the global evaluation of the relationship fulfillment available in the best available alternative relationship, switching cost, the cost to change employers, and voice, constructive attempts to change objectionable relationship conditions, were adapted from measures developed by Ping (1993). These measures were unidimensional using EML-CFA and the final test data.

Exiting was measured as exit propensity, the disinclination to continue the current relationship, and was initially measured using two scales, one due to Bluedorn (1982), and another adapted from a measure developed by Ping (1993). Based on pretest results only the second measure was unidimensional using EML-CFA and it was included in the final test were it was also unidimensional using EML-CFA.

Example items for these measures are shown in Table 4.

Sampling

The study population was U.S. salespersons who represent a single firm which employs them (i.e., excluding independent agents and brokers). The sampling frame was the circulation list of a major sales publication, and sampling involved n-th name selections of 100 pretest salesperson names and addresses, then 900 final test names and addresses. The pre- and final test mailings included a cover letter assuring respondent anonymity, and a $2 bill as a response incentive, and the final test mailing was followed by two follow-up postcard mailings, a remailing of the questionnaire, and two more postcard follow-ups.

Pretesting

As discussed earlier, the final test mailing was preceded by several scenario analyses that were used to preliminarily validate the measures (see Footnote 1). These were followed by a pretest mailing that was used primarily to gauge the response rate, and secondarily to further assess the psychometric properties of the measures. Minor changes were made to the letter, and questionnaire instructions and format, between the pre- and final test mailings.

Final Test

Two hundred eighty-four responses were usable from the final-test mailing (32% usable response rate). These responses were used to determine the representativeness of the responses, and to reexamine
the psychometric properties of the measures. Based on a comparison of the demographics of the responses and published salespersons’ demographics, the set of responses were judged to be representative of the study population.

Reliability and Validity

As discussed earlier, the measures were unidimensional in the final test except for organizational commitment, which produced three dimensions. The items in each factor were averaged to produce three indicators of the second order construct organizational commitment. To conserve degrees of freedom these three indicators were then averaged to produce a single indicator of organizational commitment to estimate the Figure 1 model.

The reliabilities of the study variables were above .88 which suggests the study measures were reliable (see Table 3).

Each measure was judged to be content valid, and each latent variable was correlated with the other latent variables in theoretically plausible directions (see Table 3), which suggests the construct validity of these measures. In addition, they each had an Average Variance Extracted (AVE) (Fornell and Larker 1981) above .5 which suggests their discriminant validity (see Table 3). Where $\gamma_i$ is the loading of the indicator $x_i$ on its Latent Variable $X$, Var is variance, $e_i$ is the measurement error of $x_i$, and $\Gamma$ indicates a sum. For unidimensional $X$, $\Gamma\gamma_i^2$ is approximated by the sum of squares of the loadings in a Maximum Likelihood exploratory common factor analysis (i.e., the sum of the communalities or the eigenvalue of the items). $\text{Var}(X)$ can be set to one, and $\Gamma\text{Var}(e_i)$ is approximated by $n - \Gamma\gamma_i^2$. Substituting these estimates into the above equation, AVE is approximately the explained variance of the items in a Maximum Likelihood exploratory common factor analysis. Further, with two exceptions, each measure’s squared correlation with the other study variables was less than the AVE’s of both variables involved in the correlation, which suggests their discriminant validity (see Fornell and Larker 1981 and Table 3). However, Satisfaction (SAT) and Procedural Justice (PJUST) had AVE’s that were less than the squared correlation between them (see Table 3). This suggests that they each had more variance in common (i.e., their squared correlation) than either had in error-free variance (i.e., their AVE). This in turn suggests a lack of discriminant validity between SAT and PJUST. Stated differently, SAT was empirically indistinct from
PJJUST in the study. Similarly, SAT was indistinct from Organizational Commitment in the study. Nevertheless, this did not prevent estimation of the Figure 1 measurement and structural models.

**Measurement and Structural Models**

The measurement and structural models corresponding to Figure 1, were estimated using covariances, LISREL 8, and maximum likelihood; and the results are shown in Tables 1, 2 and 3.

The fixed values for loadings and measurement errors of the single summed indicators suggested by Kenny (1979) in the measurement and structural models were specified using reliabilities. Because a single indicator construct is under determined, estimates of its loading and measurement error variance are required. Authors have defined the reliability of an indicator as the square of the correlation between the indicator and its construct (i.e., its loading) (see Bollen 1989). Thus the loading of a construct specified with a single indicator is $\theta$, where $\Delta$ is the latent variable reliability of the measure. However, for unidimensional constructs there is little practical difference between coefficient alpha (\(\forall\)) and the latent variable reliability $\Delta$ (Anderson and Gerbing 1988). It is well known that the measurement error variance of an indicator $x$ is $\text{Var}(x)(1-\Delta)$, where $\text{Var}(x)$ is the variance of $x$. Thus the loading and measurement error of a unidimensional measure $X$ specified with a single indicator, are $\theta$ and $\text{Var}(X)(1-\forall)$ respectively.

The structural model for Figure 1 was judged to fit the data using several popular fit criteria, such as Comparative Fit Index (CFI) (Bentler 1990) and Root Mean Squared Error of Approximation (RMSEA) (Steiger 1990, see Jöreskog 1993). 

**Results and Discussion**

The study hypotheses were supported, except Procedural Justice (PJJUST) was not directly associated with affective organizational commitment (ORGCOM) (see Table 1). Based on the Table 2 total effects (i.e., direct- plus indirect effects) implied by the paths in Figure 1, the hypothesized relationships were also supported except PJJUST was not associated with ORGCOM.

In probing the Figure 1 model, the direct path between Satisfaction (SAT) and Exiting (EXITING) was non significant when it was freed ($\varnothing_{\text{ORGCOM, PJUST}} = .15, t = .75$). This is consistent with other satisfaction-organizational commitment-exiting studies, and together such results add to the growing evidence that there may be no direct relationship between satisfaction and exiting.
The significant negative direct and total effects of ORGCOM on Alternative Attractiveness (ALT) in the study, and the non significant direct and total effects in the other direction, suggest that salesperson alternative attractiveness was likely to be increased by declining affective organizational commitment as Rusbult and Buunk (1993) predicted, but that increased alternative attractiveness was not likely to have an effect on affective organizational commitment. While generalizing from a single study is risky, this suggests that salespersons are likely to devalue alternatives as their affective organizational commitment increases. Unfortunately however, this also means that as affective organizational commitment declines for salespersons the attractiveness of their alternatives is likely to increase.

ORGCOM and Voice (VOICE) were positively associated in the study. Further, modification indices and first derivatives (not reported) suggest that the direction of the effect was from ORGCOM to VOICE and not from VOICE to ORGCOM in the study. This suggests that as salespersons became more affectively committed to their organizations, they were more likely to be vocal when the inevitable relationship problems occurred. In different words, salespersons who were not vocal were likely to be less affectively committed to their organizations. While the association was only moderate, this is consistent with Napoleon’s statement that his only fear was the silence of his army.

ORGCOM was negatively associated with EXITING in the study. Based on modification indices and first derivatives (not reported), it is likely that the direction of this effect was from ORGCOM to EXITING and not from EXITING to ORGCOM. However in this case it is not necessarily true that not exiting implies affective commitment. Based on the significant positive association between ALT and EXITING, unattractive alternatives may also hold exiting at bay. In fact, this is the central argument that Allen and Meyer 1990, among others (see Levinger 1979), appear to make regarding relationship commitment: individuals stay in (i.e., appear to be committed to) a relationship either because they want to (i.e., relationship quality is high) or because they have to (e.g., the alternatives are not attractive, etc.).

The relationship between PJUST and ORGCOM has not been tested to our knowledge. Possible explanations for the observed lack of association between the two variables in salespersons include too small a sample (the indirect PJUST-GOALCON-ORGCOM effect approached significance--**Indirect**, ORGCOM,PJUST-GOALCON = .08, t = 1.85), invalidity in procedural justice (or organizational commitment) (which the final test psychometrics seemed to rule out), and lack of variance (however, Var(PJUST) = .73, VAR(ORGCOM) = 1.21, which compare favorably to the variances of the other
variables that ranged from .34 to 1.41). Other possibilities include that salespersons in the sample simply were not likely to be sensitive to procedural justice when forming or modifying their organizational commitment, or that SAT accounted for most the PJUST-ORGCOM variance because PJUST was empirically indistinct from SAT.

To test this last possibility, items were omitted from SAT to increase its AVE and thereby make it distinct from PJUST and ORGCOM. While the correlations of SAT with PJUST and ORGCOM remained high ($r_{SAT,PJUST} = .83$, $r_{SAT,ORGCOM} = .84$) and the content validity of SAT was degraded, the resulting PJUST-ORGCOM indirect and total effects were significant ($^{\text{Indirect}}_{ORGCOM,PJUST-GOALCON} = .22$, $t = 3.33$; $^{\text{Total}}_{ORGCOM,PJUST-GOALCON} = .27$, $t = 2.61$), but the direct effect was not ($^{\text{Direct}}_{ORGCOM,PJUST} = .04$, $t = .45$). Thus SAT may have accounted for most the PJUST-ORGCOM variance.

These results have several implications. First, the significant PJUST-GOALCON-ORGCOM association and the nonsignificant PJUST-ORGCOM association suggest the procedural justice relationship with affective organizational commitment is mediated by goal congruence for salespersons: procedural justice is likely to increase affective commitment by first increasing goal congruence, rather than directly.

The historically high observed correlations between satisfaction and affective organizational commitment when coupled with the difficulty measuring satisfaction so that it was empirically distinct from affective organizational commitment in the present study (and possibly other studies---AVE’s and discriminant validity are not routinely reported) suggest they may be quite similar as mental constructs, and there may be little practical difference between the two. Thus, it may be pointless to continue to try to distinguish between satisfaction and affective commitment.

Similarly, procedural justice and goal congruency were quite empirically similar to each other, and they were quite similar to satisfaction and affective commitment in the present study (see Table 3). These strong empirical similarities suggest these variables may be facets of a higher order construct, Relationship Quality (RQ), as Allen and Meyer (1990) seem to imply. For example, SAT, PJUST, GOALCON, and ORGCOM were respecified in the present study as a second order construct that fit the data ($\chi^2/df/p$-value = 2.6/2/.27, GFI = .99, AGFI = .95, CFI = .99, and RMSEA = .04). In addition, they were all about equally correlated with RQ ($r_{RQ,ORGCOM} = .57$, $r_{RQ,SAT} = .58$, $r_{RQ,GOALCON} = .52$, $r_{RQ,PJUST} = .63$). Thus an alternative Figure 1 model would specify satisfaction,
procedural justice, goal congruency, and affective organizational commitment as first-order “indicators” of the second-order construct RQ.

However, Allen and Meyer’s (1990) arguments that relationship commitment is composed of affective commitment, normative commitment, and structural commitment suggest there may be another Figure 1 model that involves a higher order construct Relationship Commitment (RC) and is composed of Relationship Quality and Structural Commitment variables such as alternative attractiveness and switching cost. Indeed respecifying Figure 1 by combining SAT, PJUST, GOALCON, ORGCOM, ALT and SWITCH into a second order construct, RC, nearly fit the data ($\chi^2$/df/p-value = 20/9/.01, GFI = .95, AGFI = .89, CFI = .97, and RMSEA = .09). Specifying RC without PJUST fit the data almost perfectly ($\chi^2$/df/p-value = 4.1/5/.52, GFI = .98, AGFI = .96, CFI = 1.00, and RMSEA = .00). The correlations of RC with these “indicators” were $r_{RC, ORGCOM} = .76$, $r_{RC, ALT} = .39$, $r_{RC, SAT} = .61$, $r_{RC, GOALCON} = .42$, and $r_{RC, SWITCH} = .13$.

This result has several implications. In this study Relationship Commitment could be specified with Relationship Quality variables such as affective commitment, satisfaction, and goal congruency, plus Structural Commitment variables such as alternative attractiveness and switching cost, which supports Allen and Meyer (1990) arguments concerning the facets of person-organization commitment. Further, because Relationship Quality variables such as ORGCOM and SAT were the most highly correlated with RC, and Structural Commitment variables such as ALT and SWITCH were less so, relationship commitment was driven primarily by relationship quality in this context. The EXITING associations with ORGCOM and ALT in the original Figure 1 model suggest the same thing: the opposite of relationship commitment, exiting, is driven primarily by relationship quality variables in this context.
References


Table 1- Standardized Direct Effect Estimates for the Figure 1 Model\(^a\)

Model Fit: \(\chi^2/df=20/13/.05\), GFI=.96, AGFI=.89, CFI=.98, RMSEA=.07\(^b\)

<table>
<thead>
<tr>
<th></th>
<th>SAT</th>
<th>PJUST</th>
<th>GOALCON</th>
<th>ALT</th>
<th>SWITCH</th>
<th>ORGCOM</th>
<th>R(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.65</td>
</tr>
<tr>
<td>PJUST</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.65</td>
</tr>
<tr>
<td>GOALCON</td>
<td>0.435</td>
<td>0.404</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.65</td>
</tr>
<tr>
<td>ALT</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-0.174</td>
<td>-0.691</td>
</tr>
<tr>
<td>VOICE</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>.14</td>
</tr>
<tr>
<td>EXITING</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.232</td>
<td>-0.176</td>
<td>-0.553</td>
</tr>
<tr>
<td>ORGCOM</td>
<td>0.763</td>
<td>-0.123</td>
<td>0.210</td>
<td>-0.157</td>
<td>-</td>
<td>-</td>
<td>.91</td>
</tr>
</tbody>
</table>

\(^a\) Standardized Direct Effect Estimates for the Figure 1 Model

\(^b\) Model Fit: \(\chi^2/df=20/13/.05\), GFI=.96, AGFI=.89, CFI=.98, RMSEA=.07
The table is read from column to row. For example the direct effect of SAT on GOALCON is .435.

CFI = Comparative Fit Index (.90 or higher indicates acceptable fit), and RMSEA = Root Mean Squared Error of Approximation (0-.05 suggests close model-to-data fit, .051-.08 suggests acceptable model-to-data fit) (Steiger 1990).

T-value.
Table 2- Standardized Total Effect Estimates for the Figure 1 Model

<table>
<thead>
<tr>
<th>ORGCOM</th>
<th>SAT</th>
<th>PJJUST</th>
<th>GOALCON</th>
<th>ALT</th>
<th>SWITCH</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>------</td>
<td>--------</td>
<td>---------</td>
<td>-------</td>
<td>--------</td>
</tr>
<tr>
<td>SAT</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PJJUST</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>GOALCON</td>
<td>0.435</td>
<td>0.404</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>ALT</td>
<td>-0.663</td>
<td>0.029</td>
<td>-0.163</td>
<td>0.122</td>
<td>-0.195</td>
</tr>
<tr>
<td></td>
<td>(-6.677)</td>
<td>(0.390)</td>
<td>(-2.557)</td>
<td>(1.771)</td>
<td>(-2.698)</td>
</tr>
<tr>
<td>(-8.812)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWITCH</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>VOICE</td>
<td>0.361</td>
<td>-0.016</td>
<td>0.089</td>
<td>-0.066</td>
<td>0.011</td>
</tr>
<tr>
<td></td>
<td>(4.066)</td>
<td>(-0.392)</td>
<td>(2.224)</td>
<td>(-1.614)</td>
<td>(1.404)</td>
</tr>
<tr>
<td>(4.309)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EXITING</td>
<td>-0.685</td>
<td>0.030</td>
<td>-0.169</td>
<td>0.358</td>
<td>-0.239</td>
</tr>
<tr>
<td>.801</td>
<td>(-7.231)</td>
<td>(0.390)</td>
<td>(-2.581)</td>
<td>(3.199)</td>
<td>(-3.750)</td>
</tr>
<tr>
<td>(-9.185)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ORGCOM</td>
<td>0.959</td>
<td>-0.042</td>
<td>0.236</td>
<td>-0.176</td>
<td>0.030</td>
</tr>
<tr>
<td>0.122</td>
<td>(8.625)</td>
<td>(-0.390)</td>
<td>(2.625)</td>
<td>(-1.174)</td>
<td>(1.488)</td>
</tr>
</tbody>
</table>

a The table is read from column to row. For example the total effect of SAT on ALT is -.643.
b T-value.
Table 3- Psychometrics of the Study Measures

Disattenuated) Correlations:

<table>
<thead>
<tr>
<th></th>
<th>SAT</th>
<th>PJJUST</th>
<th>GOALCON</th>
<th>ALT</th>
<th>SWITCH</th>
<th>VOICE</th>
<th>EXITING</th>
<th>ORGCOM</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.956</td>
</tr>
<tr>
<td>PJJUST</td>
<td>0.868</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.979</td>
</tr>
<tr>
<td>GOALCON</td>
<td>0.786</td>
<td>0.782</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.912</td>
</tr>
<tr>
<td>ALT</td>
<td>-0.696</td>
<td>-0.589</td>
<td>-0.597</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.951</td>
</tr>
<tr>
<td>SWITCH</td>
<td>0.295</td>
<td>0.216</td>
<td>0.216</td>
<td>-0.385</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td>.895</td>
</tr>
<tr>
<td>VOICE</td>
<td>0.351</td>
<td>0.300</td>
<td>0.305</td>
<td>-0.303</td>
<td>0.115</td>
<td>1</td>
<td></td>
<td></td>
<td>.967</td>
</tr>
<tr>
<td>EXITING</td>
<td>-0.729</td>
<td>-0.616</td>
<td>-0.624</td>
<td>0.745</td>
<td>-0.435</td>
<td>-0.299</td>
<td>1</td>
<td></td>
<td>.978</td>
</tr>
<tr>
<td>ORGCOM</td>
<td>0.931</td>
<td>0.797</td>
<td>0.808</td>
<td>-0.804</td>
<td>0.304</td>
<td>0.377</td>
<td>-0.794</td>
<td>1</td>
<td>.886</td>
</tr>
</tbody>
</table>

(Disattenuated) Squared Correlations:

\[
\text{AVE}^c \rightarrow \begin{array}{cccccccc}
0.733 & 0.726 & 0.677 & 0.723 & 0.740 & 0.618 & 0.769 \\
0.731 & & & & & & & \\
\end{array}
\]

<table>
<thead>
<tr>
<th></th>
<th>SAT</th>
<th>PJJUST</th>
<th>GOALCON</th>
<th>ALT</th>
<th>SWITCH</th>
<th>VOICE</th>
<th>EXITING</th>
<th>ORGCOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT</td>
<td>0.733</td>
<td>0.753</td>
<td>0.612</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PJJUST</td>
<td>0.726</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOALCON</td>
<td>0.677</td>
<td>0.618</td>
<td>0.347</td>
<td>0.356</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ALT</td>
<td>0.723</td>
<td>0.484</td>
<td>0.047</td>
<td>0.047</td>
<td>0.148</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SWITCH</td>
<td>0.740</td>
<td>0.087</td>
<td>0.090</td>
<td>0.093</td>
<td>0.092</td>
<td>0.013</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>VOICE</td>
<td>0.618</td>
<td>0.123</td>
<td>0.379</td>
<td>0.389</td>
<td>0.555</td>
<td>0.189</td>
<td>0.089</td>
<td>1</td>
</tr>
<tr>
<td>EXITING</td>
<td>0.769</td>
<td>0.635</td>
<td>0.653</td>
<td>0.646</td>
<td>0.092</td>
<td>0.142</td>
<td>0.630</td>
<td>1</td>
</tr>
<tr>
<td>ORGCOM</td>
<td>0.731</td>
<td>0.867</td>
<td>0.635</td>
<td>0.653</td>
<td>0.646</td>
<td>0.092</td>
<td>0.142</td>
<td>0.630</td>
</tr>
</tbody>
</table>

\[^a\] From the measurement model corresponding to Figure 1.

\[^b\] An italic indicates a squared correlation that is greater than the AVE of one or both variables involved in the correlation. This suggests lack of discriminant validity between the two variables involved in the correlation (see Fornell and Larker 1981).

\[^c\] Average Variance Extracted.
<table>
<thead>
<tr>
<th>Measure</th>
<th>Example Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT (8 items)</td>
<td>All in all, my relationship with my company is very satisfactory (5 point Likert scale).</td>
</tr>
<tr>
<td>PJUST (18)</td>
<td>The company's policies are very fair (5 point Likert scale).</td>
</tr>
<tr>
<td>GOALCON (5)</td>
<td>Our salespeople strongly feel that they and the company work for common goals and objectives (7 point rating scale- agree to disagree).</td>
</tr>
<tr>
<td>ALT (7)</td>
<td>In general, I would be _____ satisfied with the alternative company than/as I am with my company.</td>
</tr>
<tr>
<td></td>
<td>a. Much more b. More c. As d. Less e. Much less (5 point rating scale)</td>
</tr>
<tr>
<td>SWITCH (6)</td>
<td>Generally speaking, the costs in time, money, effort and grief to switch employers would be high (5 point Likert scale).</td>
</tr>
<tr>
<td>VOICE (9)</td>
<td>I will cooperatively try to change things in my company to correct problems I may have with them (5 point Likert scale).</td>
</tr>
<tr>
<td>EXITING (8)</td>
<td>I will probably stop working for my company in the near future (5 point Likert scale).</td>
</tr>
<tr>
<td>ORGCOM (15)</td>
<td>I am extremely glad I chose this organization to work for over others I was considering at the time I joined (7 point Likert scale).</td>
</tr>
</tbody>
</table>

* The parentheses contain the number of items in each measure.
Each construct was specified with a single indicator using the Kenny (1979) procedure described on p. 8. The nonrecursive relationship between ALT and ORGCOM was specified to test the hypothesized direction of that association and the model is identified using a procedure suggested by Berry (1984). The signs indicate the hypothesized associations, and, unless otherwise indicated by parentheses, they also indicate the observed associations.
Scenario analysis can be used for measure evaluation (see Ping 1996). It involves an experiment in which subjects, typically students, read written scenarios that ask them to imagine they are the subjects of an experiment, then they complete a questionnaire containing the study measures. The results, when compared with other research designs such as surveys, are reported to be similar enough (e.g., Rusult, Farrell, Rogers and Mainous 1988) to suggest that scenario analysis may be useful in new measure development and the verification of existing measures.

The Bagozzi (1980a) measure exhibited low convergent validity in the pretests (Average Variance Extracted = .37-- see Footnote 5). It was actually included in the final test to compare the results with the scenario analyses, and it performed similarly (e.g., Average Variance Extracted = .45).

While organizational commitment was unidimensional when it was proposed (i.e., in Mowday, Steers and Porter 1979), it has been multidimensional when used with salespersons (e.g., Sager 1994).

In addition to being multidimensional in the pretests, the Bluedorn (1982) measure exhibited implausible correlations with other study measures (e.g., it was either not correlated or positively correlated with the satisfaction measures-- Michaels and Spector 1982 reported similar results).

AVE can be estimated using estimates available in SPSS, SAS, etc. AVE is given by,

\[ \text{AVE}_X = \frac{(\Gamma^2 \Var(X))}{(\Gamma^2 \Var(X) + \Gamma \Var(e_i))} \]

The Bagozzi (1980a) measure fared even worse. Because its AVE was so low, it was indistinct from JUST, GOALCON, ORGCOM, and EXITING.

The Figure 1 model was identified using a procedure suggested by Berry (1984).

The measurement model for Figure 1 had zero degrees of freedom and fit the data perfectly.

Model fit using chi square, GFI and AGFI, were slightly low for the Figure 1 structural model (see Table 1). However, chi square, GFI and AGFI may not be adequate for fit assessment in larger samples or models-- see Anderson and Gerbing 1984.

Sager (1994) observed a direct SAT-EXITING association in the presence of organizational commitment. However, the study associations did not account for measurement error which can bias coefficient estimates in unknown directions.

Such evidence should be considered as merely suggestive. Directionality can only be disproved by a longitudinal research design.
See Footnote 11.

See Footnote 11.
EXITING IN A MARKETING CHANNEL

Robert A. Ping, Jr.
Associate Professor of Marketing
College of Business Administration
The Wright State University
Dayton, OH 45435
EXITING IN A MARKETING CHANNEL

Abstract

Despite its importance in interfirm relationship maintenance, relatively little is known of exiting in marketing channels. In relationship marketing exiting is assumed to be the result of relationship failure, and research there has focused on the formation of economic exchange relationships. While authors have argued there are forces that attenuate exiting in these relationships, there have been surprisingly few empirical studies of exiting in Marketing. Moreover, channel studies investigating exiting and its predictors have produced mixed and counter-intuitive results. This research proposes exiting can be predicted by other relationship behaviors including voice, and relationship constraints, specifically satisfaction and structural constraint (the mobility barrier between the present and alternative relationships). The study results support these proposals, and shed additional light on exiting in channel relationships.

Introduction

Much research involving firms in long-term buyer-seller relationships such as strategic alliances, just-in-time/quick response relationships, inter-firm partnerships, joint ventures, and marketing channels, has concentrated on their formation (see Wilson 1995; also see Anderson and Narus 1984, 1990; Anderson and Weitz 1989, 1992; Dwyer, Schurr and Oh 1987; Ford 1980; Frazier 1983; Frazier and Rody 1991; Frazier, Spekman, O’Neil 1988; Gadde and Mattsson 1987; Håkansson 1982; Hallén, Johanson and Seyed-Mohamed 1991; Heide and John 1988, 1990, 1992; Skinner, Gassenheimer and Kelly 1992; Stern and Scheer 1991; Webster 1979; Weitz and Jap 1995). Less is known of the maintenance of these relationships, and relatively little is known of their dissolution. Perhaps as a result authors have called for research on these matters (Dwyer, Schurr and Oh 1987; Ping and Dwyer 1991; Ping 1993; Weitz and Jap 1995; Wilson 1995). Additional knowledge of the dissolution of economic exchange relationships, in particular predictors of exiting, should be useful to relationship managers in the maintenance of these relationships.

Relationship Dissolution

Relationship dissolution has received attention in several literatures. These include some that appear unrelated to inter-firm relationships, such as employee adaptation-to-work and romantic relationships. In the marketing literature for example, Dwyer, Schurr and Oh (1987) proposed long-term buyer-seller relationships develop in five phases: awareness of a potential economic exchange partner, then relationship exploration, expansion, commitment, and dissolution. Paralleling Duck’s (1982) proposal for romantic relationships, they also proposed the dissolution of these relationships is comprised four stages: intrapsychic (relationship...
evaluation), interactive (relationship discussion with the partner firm), social (public announcement), and grave dressing (social and psychological recovery) stages (also see Ping and Dwyer 1991).

In the employee adaptation-to-work literature, employment relationship dissolution or employee exiting is argued to consist of several stages: thoughts of quitting, cost-benefit analysis of quitting, identification and evaluation of alternatives, intention to quit, and quitting (see Mobley 1977). While useful, this and the Dwyer, Schurr and Oh (1987) frameworks seem incomplete. They do not include alternatives to exiting for dissatisfied subjects that cannot exit the relationship (because there is no alternative relationship), or will not exit (because the cost is unacceptable).

However in the economics literature, Hirschman (1970) proposed alternatives to exiting a dissatisfactory relationship: loyalty and voice (loyalty is remaining silent, confident things will get better, and voice is constructive attempts by the subject to change objectionable relationship conditions). In the romantic relationships literature Rusbult, Zembrodt and Gunn (1982) proposed neglect as an additional alternative to exiting (neglect is allowing the relationship to deteriorate). Alternatives to exiting a dissatisfactory employment relationship that are similar to loyalty; voice and neglect have also been proposed. They include attempts to change undesired aspects of work, aggressive/retaliatory responses, psychological withdrawal and avoidance (e.g., lateness and absenteeism), and cognitive readjustment (Rosse and Miller 1984).

Hirschman (1970:86) proposed loyalty, voice, and exit are linked. Loyalty should be followed by voice then exiting, with exiting also a possibility after loyalty. Similarly Rosse (1988) argued employee exiting should be preceded by relationship neglectful activities that include lateness and absenteeism. These proposals suggest relationship dissolution may have predictors that include loyalty, voice, and neglect.

Rusbult, Zembrodt and Gunn (1982) proposed that loyalty, voice, neglect, and exiting had the predictors relationship satisfaction, the attractiveness of the alternative relationship, and relationship investments. In the marketing literature Ping (1993) argued that loyalty, voice, neglect and exiting were responses to problems in channel relationships. He also proposed these responses to relationship problems should have as predictors the Rusbult, Zembrodt and Gunn variables, and the cost to switch to the alternative relationship. These associations have been tested (see for example Rusbult, Zembrodt and Gunn 1982; Rusbult, Farrell, Rogers and Mainous 1988; Ping 1993). However, the results have been mixed and counter-intuitive (e.g., the associations have been inconsistently observed, and alternative attractiveness typically was positively associated with voice contrary to Hirschman’s 1970 predictions).

*The Present Research*
The present research investigates predictors of exiting in long-term buyer-seller relationships between firms. Specifically it tests linkages among exiting operationalized as exit-propensity, and the other responses to relationship problems, loyalty, voice, neglect (exit-propensity is the disinclination to continue the current relationship).\(^1\) The proposed model (see Figure 2) also includes the Rusbult, Zembrodt and Gunn/Ping predictors of relationship problems: satisfaction, alternative attractiveness, investment, and switching cost. However alternative attractiveness, relationship investment, and switching cost are argued to be instances or indicators of a second-order construct, the cost to exit a relationship, which is linked to exiting.

The paper begins by discussing the Hirschman/Rusbult, Zembrodt and Gunn responses to relationship problems.\(^2\) Using theory from several literatures, including some that seem unrelated to inter-firm relationships such as employee adaptation-to-work, the paper then proposes associations between exit-propensity and loyalty, voice, neglect, satisfaction, and cost-of-exit in committed buyer-seller relationships between firms. The results of a test of these proposals involving survey data and structural equation analysis in a marketing channel context is then presented.

At first glance this topic may seem less important than other aspects of buyer-seller relationships between firms, such as knowledge of how and why these relationships develop. However, knowledge of responses to the inevitable problems in buyer-seller relationships, and their connection to relationship dissolution, should help firms maintain these relationships once they develop so they are likely to become long-term relationships.

The study contributes to several literatures, including inter-firm relationship marketing. It fills a gap in the responses-to-dissatisfaction literature; it proposes the Hirschman/Rusbult responses to relationship problems may be coping strategies, and investigates the associations among these responses in an inter-firm context. Authors have observed that knowledge of relationship dissolution provides closure in the relationship development process (Ping and Dwyer 1988). The study also contributes a first test in any context of

---

\(^1\) We will distinguish between exit-propensity, the disinclination to continue the relationship, and exit, leaving the relationship. Exit-propensity involves planning to leave. It is comprised of activities that precede physically leaving such as thinking of exiting, intending to search for alternatives, evaluation of alternatives, and intention to exit (see Mobley 1977). Exit involves physically leaving. It includes activities such as breaking contract with the partner firm, contracting with an alternative partner firm, disposing of relationship specific assets, acquiring assets specific to the alternative relationship, etc.

Exit-propensity and exit have been strongly and positively linked (see the literature summary in Bluedorn 1982). In this paper exit is operationalized as exit-propensity because exit is a dichotomous variable, and such variables can produce estimation problems with structural equation analysis. Specifically, dichotomous variables require Asymptotic Distribution Free (ADF) estimation (see Jöreskog and Sörbom 1996), but ADF estimates may not be appropriate for methodologically small samples (i.e., 200-300 cases) (see Hu, Bentler and Kano 1992).

\(^2\) Relationship problems are viewed from the subject firm's perspective. They are actions or inactions by their partner firm that violate relational norms-- see Kaufmann and Stern (1988).
Hirschman's (1970) proposed associations among loyalty, voice and exit. In addition, it contributes new theory to inter-firm relationships regarding the relationship of neglect with voice and exit-propensity. The study contributes to the emerging relationship marketing literature (see the Fall 1995 issue of the *Journal of the Academy of Marketing Science*); it proposes alternative attractiveness, investment and switching cost are facets of a higher-order predictor of exiting, cost-of-exit. Further, it illuminates the likely role of cost-of-exit, as well as satisfaction, in relationship maintenance. Finally, the study provides a first empirical test in an inter-firm context of Hirschman=s (1970) and others arguments that voice may be negatively associated with exit (see for example Spencer 1986, Fornell and Wernerfelt 1987).

*Responses to Relationship Problems*

Hirschman (1970) noted economic progress is negatively correlated with society=s tolerance for performance deterioration in firms and organizations. However he believed slack, as he defined it, the gap between potential and actual firm or organization performance, is generated all the time. He conceived the performance of firms and organizations to be permanently subject to this slack; to decline and decay, and a gradual loss of rationality, efficiency, and surplus producing energy, no matter how well the institutional framework within which the firm or organization functioned was designed. Yet he maintained declined firms and organizations do recover from their performance lapses; and concerned himself with these recoveries.

In particular, Hirschman (1970) proposed dissatisfied members or clients of declined firms or organizations have three behavioral options available to them: remain loyal, use voice, or leave the relationship (exit).

*Voice*

Hirschman (1970) characterized Voice as, A...any attempt at all to change, rather than to escape from, an objectionable state of affairs" (p. 30). He pointed out customer voice alerts a firm or organization to its failings.

Hirschman (1970) observed that firm losses from customer exiting will be small for a firm with demand that is highly inelastic with respect to performance lapses in their product or service. As a result, a firm may not be made aware something is wrong with its products or services, and repair of performance lapses may not take place. But if this demand is highly elastic, repair of performance lapses may not take place then either, this time because the firm will cease to exist because of customer exiting.

For repair to be possible, a firm's product or service elasticity of demand with respect to performance lapses should be neither very large nor very small. In order for a firm to be able to repair its performance lapses, a firm should have a mixture of Aalert" and Ainert" customers. Alert customers make a firm aware of
its failings (via exit and voice). Inert (i.e., loyal) and vocal customers give it the time and dollar cushion needed for repair efforts to come to fruition.

In the romantic relationships literature Rusbult, Johnson and Morrow (1986a,b) operationalized voice as Hirschman=s (1970) original notion of alerting the relationship partner, but added the notion of compromise and working out relationship problems. This focused notion of voice includes constructive actions aimed at relationship improvement beyond alerting the partner, such as working with them to improve objectionable relationship conditions; and it more fully accounts for Aattempts to change an objectionable state of affairs" in committed relationships. The Rusbult, Johnson and Morrow (1986a,b) notion of voice is consistent with Hirschman=s (1970) characterization of voice. However, it excludes other more negative operationalizations of voice (i.e., less relationship-maintenance oriented) such as simply complaining or negative word-of-mouth (Diener and Grayser 1978). Voice in this paper involves constructive (i.e., relationship maintenance oriented) behavior aimed at the partner firm and intended to change an objectionable state of affairs; including but not limited to alerting the partner firm to relationship problems.

**Loyalty**

Hirschman (1970) proposed inert customers included those who expected the efforts of others, combined with their own faithfulness, to be successful in improving relationship conditions. He characterized this group as loyal and described them as those who remain silent with confidence things will get better. He argued the decision to be loyal was based on: i) an evaluation of the chances of getting the firm back on track, through the actions of others or something that will improve matters; and ii) a judgement that it is worthwhile to trade the certainty or uncertainty of the alternative relationship against those chances.

There has been some confusion in the conceptualization and operationalization of Hirschman=s (1970) notion of loyalty. Early in his monograph he characterized loyalty as remaining silent, confident things will get better. However he subsequently described loyalty as simply refusing to exit, and stated his earlier depiction of loyalty described non-exiters who do not wish to be influential. Perhaps as a result, studies have conceptualized loyalty as Hirschman (1970) did, but have operationalized it variously. Some studies have operationalized loyalty as remaining silent, confident things will get better (e.g., Farrell 1983, Ping 1993). Other studies have operationalized loyalty by including items that appear to tap relationship commitment (see for example Rusbult, Farrell, Rogers and Mainous 1988). In this paper loyalty is conceptualized as Hirschman=s (1970) original notion of loyalty (i.e., remaining silent, confident things will get better), and it is operationalized
consistent with that conceptualization.

**Neglect**

Paralleling Rusbult, Zembrodt and Gunn (1982), Ping (1993) argued a firm could react to relationship problems by neglecting the relationship (i.e., allowing the relationship to deteriorate) as an alternative to exiting. He stated neglect involved not caring about the relationship, expending no effort to maintain it, and a willingness to let the relationship deteriorate. Ping (1993) suggested it was emotional, as opposed to physical, exiting. He maintained neglect was marked by impersonal, possibly reluctant, even grudging, exchanges with the partner firm. Ping (1993) observed neglect involved reduced contact with the partner firm (but not necessarily reduced economic exchanges with them); ordering in writing not over the phone, and delegating contacts with the partner firm to low-level staff. Rusbult and Zembrodt (1983) characterized neglect in romantic relationships as inattentive behavior, such as lack of caring and staying away. Farrell (1983) characterized employee neglect as lax and disregardful behavior, and suggested it included lateness and absenteeism (also see Rusbult, Farrell, Rogers and Mainous 1988).

**Predictors of Responses to Relationship Problems**

Ping (1993) also proposed overall satisfaction with the relationship, alternative attractiveness, investment in the relationship, and the cost to switch relationships were predictors of exit-propensity and the other responses in marketing channels (also see Rusbult, Zembrodt and Gunn 1982). He proposed the existence of two types of satisfaction in inter-firm relationships, event and overall satisfaction. He maintained that, while dissatisfaction with some relationship event triggers a response (e.g., loyalty, voice, neglect, or exit-propensity), the level of overall relationship satisfaction, along with alternative attractiveness, investment, and switching cost, helps determine which response will be triggered.

Authors have noted individuals remain in a relationship because they want to, or they have to (see for example Hirschman 1970; Rusbult, Farrell, Rogers and Mainous 1988). Several authors have used the term structural commitment with having to remain in a relationship. They argue the dimensions of structural commitment or the cost to exit a relationship include available alternatives, irretrievable investments, termination procedures, and social pressures (see Johnson 1982, Levinger 1979). This and Ping’s (1993) proposal that alternative attractiveness, investment, and switching cost were predictors of loyalty, voice and neglect, suggest the cost to exit a relationship also should be a predictor of the responses to relationship problems, in particular exiting.

**The Proposed Model**
We will propose that exit propensity has the other responses to relationship problems as predictors, along with satisfaction and cost-of-exit. We will also propose that the other responses are associated with each other (see Figure 2).

Theoretical Foundations

Hirschman (1970) did not provide theoretical justification for his arguments. Nevertheless, that subjects exhibit various responses to relationship problems has been proposed in several literatures. These include marketing channels (see Ping 1993), consumer behavior (see Andreasen 1985), adaptation-to-work (see Rusbult, Farrell, Rogers and Mainous 1988), and romantic relationships (see Rusbult, Zembrodt and Gunn 1982). For example, Staw (1980) proposed employees initially attempt to exert control over their work environment. If that is impossible they attempt to make it more predictable, and if that fails, they engage in various psychological or physical withdrawal behaviors.

That individuals respond to stimuli such as relationship problems is also well established in the psychological literature (for a summary see Berkowitz 1962). That cognitive intervention occurs between stimulus and response is widely held or implied in psychology and organizational behavior (for individuals), and micro economics (for firms) (see Machlup 1967; however, see Nagel 1963 for a dissenting view). For example, Rosse and Miller (1984) proposed a stimulus that produces relative dissatisfaction (i.e., dissatisfaction with an event or outcome as opposed to dissatisfaction with the relationship) produces an evaluation of alternative responses; then it produces behavior (also see French, Rogers and Cogg 1974; Ping and Dwyer 1991). The evaluation of response alternatives is also consistent with a cognitive orientation, specifically theories of choice. For example, Steiner (1980) proposed options are more desirable or less so depending on their (cognitively determined) expected payoffs versus their expected costs (also see Homans 1974, Vroom 1964).

Thus relationship problems should produce relative dissatisfaction that in turn produces a cognitive evaluation of alternative responses (i.e., loyalty, voice, neglect and exit), and a behavioral response (i.e., loyalty, voice, neglect or exit) (Rosse and Miller 1984; also see Frazier 1983). Evaluation of alternative responses should be influenced by the expected payoffs and costs associated with each alternative, and experience (Steiner 1980). Costs should include activity costs (e.g., effort), and economic, psychic and opportunity costs; and payoffs should include the perceived likelihood of remedying the problem.

It is plausible Hirschman’s (1970) assertions for individuals are also true for firms. It is plausible firms would behave as if they were rational. Inter-firm relationship problems should produce relative dissatisfaction
and evaluation (Frazier 1983), and a response would be observed. Specifically, it is plausible firms would behave as if they assess the payoffs and costs associated with the responses to relationship problems. Then they should either exit the inter-firm relationship, or stay and optimistically remain silent (i.e., be loyal) or attempt to be influential and work to change things (i.e., use voice). In the balance of the paper we will use the rational firm or as if assumption (see Machlup 1967 for a discussion of the as if assumption for firms), and will implicitly justify firm-level theory by citing individual-level theory from psychology and social psychology (including employees adapting to work).

**Loyalty and Voice**

Hirschman (1970:88) proposed subjects respond to relationship problems first with loyalty, then voice, and finally exit; with exit also a possibility after a (possibly brief) period of loyalty. Hirschman’s (1970) arguments are plausible for firms based on firm rationality and the expected payoffs and costs of each response. However, while some subjects might exit when relationship problems first occur, in committed buyer-seller relationships between firms it is likely when relationship problems first occur, firms would remain loyal or use voice. Specifically, the activity (i.e., effort), economic, psychic and opportunity costs of exiting a committed and satisfactory relationship should initially appear higher than the cost of a loyalty or voice response. For example, being in a committed and satisfactory buyer-seller relationship should reduce the attractiveness of alternative relationships (see Johnson and Rusbult 1989). There also may be relationship-specific investments (i.e., economic, activity, and opportunity costs that helped ensure future exchanges—see Macneil 1980) which would be lost by exiting. Further, switching costs (i.e., economic, opportunity, activity and psychic costs to terminate the current relationship, and startup a new one) also may be high (see Ping 1993).

Loyalty involves optimistically doing nothing about a relationship problem; voice involves activity and opportunity cost to remedy a relationship problem. Both involve the performance risk of others and/or the partner (i.e., the risk loyalty or voice will not remedy the problem). However in buyer-seller relationships between firms neither involves the costs of dismantling the current relationship and putting another in its place (i.e., exiting). Nor do they involve the performance risk of the alternative relationship (i.e., the risk the alternative relationship would be the same or worse than the incumbent relationship). Thus, when problems first occur in these relationships, they should produce a loyalty or a voice response, because they are less costly than exiting.

However when problems first occur in these relationships, loyalty should be perceived as less costly than voice. Loyalty requires less effort than voice because it is passive and involves doing nothing about a
relationship problem. Voice, on the other hand, requires taking action to remedy a relationship problem (Rusbult, Zembrodt and Gunn 1982). It involves activity and opportunity cost, and possibly economic cost. In addition, when problems first occur, there may be little to suggest the actions of others, including partner’s own unprompted actions, would not remedy a relationship problem. Voice may also appear costly if the subject is concerned that it might be ignored or resisted by partner, or partner might retaliate instead of solving the problem. Finally, authors have commented on firms’ penchant for inaction (e.g., loyalty), even when there are powerful incentives to take action (e.g., voice) (see Yasai-Ardekani 1986).

If loyalty is not an effective response to problems in these relationships (i.e., problems remain unremedied), and the subject grows suspicious that more relationship problems will occur and loyalty will continue to be ineffective (i.e., it will have no payoff), the next more costly response, voice, should become more likely. Kahneman and Tversky (1979) proposed the certain outcome (i.e., the efficacy of loyalty) should be undervalued when compared with a probabilistic outcome (i.e., the efficacy of voice). Although the cost of voice is higher, its probabilistic outcome or payoff (i.e., problem remedy) should appear more attractive than the increasingly certain outcome of loyalty (i.e., problems remain unremedied). Thus a loyalty response should become less likely, and a voice response should be more likely, and

H1: Loyalty is negatively associated with voice.

Voice and Exit-Propensity

Hirschman (1970:87) predicted if voice were unsuccessful, the subject would become unhappy about continuing the relationship, and the subject would have thoughts of exiting. It is possible that voice, unhappiness about continuing the relationship, and thoughts of exiting it could briefly coexist. However, it is more likely that constructive attempts to change objectionable relationship conditions so the subject can remain in the relationship (i.e., voice), and unhappiness about continuing the relationship and thoughts of exiting it are dissonant (Festinger 1954). Thus thoughts of exiting should extinguish constructive attempts to change objectionable relationship conditions (i.e., voice); or, thoughts of exiting should cease and the subject should continue to constructively attempt to change objectionable relationship conditions (i.e., be vocal).

As a result, if the subject’s attempts to change relationship conditions (i.e., voice) are not effective (i.e., problems remain un-remedied), and the subject grows suspicious that voice will continue to be ineffective (i.e., it will have no payoff), exit-propensity should become more likely. Although exit-propensity would be more costly, its payoff (i.e., problem remedy) should now appear more attractive than the certain outcome of voice.
(i.e., problems remain unremedied) (Kahneman and Tversky 1979). A voice response should now become less likely, and exit-propensity should be more likely. Consequently,

H2: Voice is negatively associated with exit-propensity.

**Neglect**

Staw=s (1980) and others arguments regarding withdrawal behaviors (see page 7) suggest neglect also precedes exiting. Rosse and Miller (1984), for example, argued dissatisfied employees attempt to cope with chronic problems (i.e., remedy their dissatisfaction) by using the least costly form of relationship withdrawal. If this proves unsatisfactory, progressively more costly forms of withdrawal are attempted until one is found that provides sufficient coping (also see Rosse and Hulin 1985). Subsequently Rosse (1988) found employee exiting was preceded by relationship withdrawal (i.e., coping) activities that included lateness and absenteeism (also see Farrell 1983).

Operationalizing exit as exit-propensity however, it might be argued that exit-propensity should precede neglect, because neglect is the result of inability or unwillingness to exit a relationship. Nevertheless, it is more likely in committed buyer-seller relationships between firms, neglect precedes exit-propensity because it is less costly than exit-propensity.³ Neglect involves not maintaining the relationship, and letting it deteriorate (i.e., inaction). However, exit-propensity involves actions that precede leaving the relationship. This includes searching for and evaluating alternatives (Mobley 1977), which involves activity, opportunity, and possibly economic costs. In addition, firms are again likely to prefer inaction (e.g., neglect) over action (e.g., exit-propensity) (see Yasai-Ardekani 1986).

Thus, in committed buyer-seller relationships between firms the subject should attempt to cope with chronic relationship problems by neglecting the relationship before exiting it. If neglect fails to produce sufficient coping, the subject should also have thoughts of exiting and the other activities associated with exit-propensity should follow. However, relationship neglect should not cease when exiting activities begin. It is likely that not caring about the relationship, not maintaining it, and allowing it to deteriorate (i.e., neglect) is not dissonant with activities that precede physically leaving the relationship (i.e., exit-propensity).

Therefore neglect should precede exit-propensity in these relationships because it is less costly. However, 

---

³ However, exit-propensity could subsequently (i.e., non-recursively or bi-directionally) affect neglect as proximity to physically exiting the relationship increases, or if the subject is unable to exit. These matters were investigated using a nonrecursive specification of the neglect-exit-propensity association in Figure 2 (see page 19) but the results were inconclusive (both neglect-exit-propensity paths were non significant).
neglect should continue during activities that precede physically exiting the relationship (i.e., exit-propensity) because neglect and exit-propensity are consonant. As a result,

H3: Neglect is positively associated with exit-propensity.

In committed buyer-seller relationships between firms, neglect should intervene between voice and exit-propensity as a stronger form of coping with chronic relationship problems than voice, that is less costly than exit-propensity. Neglect is a stronger form of coping with chronic relationship problems than voice because it involves no longer caring about the relationship, and thus is a form of (emotional) exiting. But, it is less costly than exit-propensity because it involves inaction.

Farrell (1983) characterized voice as constructive and positive in its potential effects on the relationship, and neglect as destructive and negative. For example, voice involves constructively attempting to change objectionable relationship conditions, while neglect involves doing nothing to improve objectionable relationship conditions. Further, Rusbult, Zembrodt and Gunn (1982) characterized voice as active, because it involves attempts to change objectionable relationship conditions. They also characterized neglect as passive because it involves doing nothing to improve objectionable relationship conditions. Thus, voice is likely to be dissonant with neglect. Attempts to change relationship conditions should extinguish not caring about the relationship. Or, attempts to change relationship conditions should cease; the subject should stop caring about the relationship, expend no more effort to maintain it, and allow it to deteriorate.

Therefore if the subject's attempts to change relationship conditions (i.e., voice) are not effective in committed buyer-seller relationships between firms (i.e., problems remain unremedied), and the subject becomes suspicious relationship problems will continue to occur and voice will continue to be ineffective (i.e., it will have no payoff), the next more costly response, neglect, should become more likely. Thus as voice becomes less likely, neglect should become more likely, and

H4: Voice is negatively associated with neglect.

Satisfaction

Ping (1993) proposed that satisfaction was related to the responses to relationship problems, and we will do likewise to avoid model misspecification. Increased satisfaction with the relationship makes economic exchanges with the partner firm more valuable (Thibaut and Kelley 1959). As their satisfaction increases, firms

---

4Omitting important antecedents that may be correlated with other model antecedents creates the missing variables problem (see James 1980). This can bias structural coefficients, because model antecedents could then be correlated with structural errors, a violation of assumptions (structural errors then contain the variance of omitted variables).
should be likely to respond positively to relationship problems, help maintain the relationship, and safeguard future satisfaction. Thus they should also likely to avoid negative responses that might jeopardize the relationship. Because they are unlikely to damage the relationship, positive responses include voice and loyalty (Rusbult, Zembrodt and Gunn 1982). Because they jeopardize the relationship, negative responses include neglect and exit-propensity. Therefore as relationship satisfaction increases, loyalty and voice become more likely, and neglect and exit-propensity become less likely. Thus,

H5: Overall relationship satisfaction is positively associated with loyalty and voice, and negatively associated with neglect and exit-propensity.

Cost-of-Exit

Authors have argued the facets or dimensions of structural commitment, or the cost to exit a relationship, include available alternatives, irretrievable investments, termination procedures, and social pressures (see Johnson 1982, Levinger 1979). This suggests the existence of a second-order construct, which we will term cost-of-exit. This construct should have first-order latent variable indicators that include a) the attractiveness of alternative exchange relationships; b) economic, activity, and opportunity costs that might be lost or obsoleted by exiting the current relationship (i.e., relationship investments); and c) economic, opportunity, activity and psychic termination costs, and startup costs for the new relationship (e.g., switching cost) (see Figure 1).

Cost-of-exit should affect the responses to relationship problems. As their cost-of-exit increases, firms should become more dependent on their partner firms (Emerson 1962). The perceived risk accompanying their responses that are relationship negative (i.e., jeopardize the relationship) also should increase because there may be much to lose (Kahneman and Tversky 1979). Thus, as their cost-of-exit increases they should be more likely to respond positively to relationship problems (i.e., with loyalty or voice), and less likely to respond negatively (i.e., with neglect or exit-propensity). Thus

H6: Cost-of-exit is positively associated with loyalty and voice, and negatively associated with neglect and exit-propensity.

Moderation

---

5 Jöreskog (1970) introduced a second-order construct as a latent variable with no observed variables as indicators. Instead, it has other latent variables for Aindicators," hence the term Asecond-order." Each of the Aindicators latent variables has observed variables for indicators as usual, and these latent variables are termed first-order constructs (see Gerbing and Anderson 1984a).
Johnson (1982) argued that when one is no longer satisfied with a relationship, the consequences of structural commitment (i.e., cost-of-exit) must be faced (see Hom and Griffeth and Sellaro 1984 for a summary of similar arguments and supportive evidence). On the other hand, Johnson and Rusbult (1989) argued satisfied subjects in committed relationships devalue alternatives, a facet of cost-of-exit. Thus when relationship satisfaction is high in these relationships, the subject may be less aware of alternatives. In committed buyer-seller relationships between firms they may also be less aware of the investment that may be lost in switching to an alternative relationship, and the other costs involved in switching relationships. Thus satisfied subjects in committed relationships may devalue or be less aware of cost-of-exit. But, when satisfaction is lower in these relationships they may become more aware of these costs to exit the relationship.

In addition, being loyal because of relationship satisfaction may be dissonant with being loyal because of high exiting costs. When satisfaction is high, cost-of-exit may be devalued (i.e., the subject is loyal because they want to be, not because they have to be). However when satisfaction is lower in committed buyer-seller relationships between firms, continued loyalty may be attributed to the cost to exit the relationship (i.e., the subject is loyal because they have to be). Thus, satisfaction should moderate the relationship between cost-of-exit and loyalty in committed buyer-seller relationships between firms. Specifically, high satisfaction should attenuate this relationship, and it should be weaker at higher levels of satisfaction. Hence,

H7: Satisfaction attenuates the association between cost-of-exit and loyalty.

These relationships are summarized in Figure 2.

Method

Measurement

Cost-of-exit To assess its psychometric properties as a second-order construct, cost-of-exit was specified using the Aindicator” latent variables alternative attractiveness (reverse coded), investment, and switching cost (see Figure 1). Cost-of-exit was then respecified in the full measurement and structural models corresponding to Figure 2 by averaging the observed indicators of each Aindicator” latent variable (i.e., alternative attractiveness (reverse coded), investment and switching cost-- see Figure 2), and using the resulting three (observed) indicators to itemize cost-of-exit. This approach has been used before (see for example Dwyer and Oh 1987). It avoids difficulties in specifying the moderation of cost-of-exit by satisfaction, which will be explained next.

Moderation The moderation of the loyalty-cost-of-exit association by satisfaction was operationalized as the product of the latent variables satisfaction and cost-of-exit (i.e., the interaction, SATxCOE). This allowed the
strength of the moderation (i.e., its coefficient size) to be assessed. The respecification of cost-of-exit with averaged indicators produced a first-order cost-of-exit latent variable. This enabled the specification of a first-order-by-first-order interaction variable (SATxCOE). The SATxCOE latent variable was itemized using a technique provided by Ping (1995) that uses a single composite indicator. This has desirable properties in this application. They include reducing the nonnormality introduced in the full measurement and structural models corresponding to Figure 2 by the indicators of an interaction, so maximum likelihood estimation can be used (see Appendix A and Ping 1995 for details).

Study Measures Satisfied, alternative attractiveness, investment, switching cost, loyalty, voice, neglect, and exit-propensity were measured based on scales developed by Ping (1993). Alternative attractiveness was measured with five-point rating scaled items, and the other study concepts were measured with balanced five-point Likert-scaled items. The study concepts, a description of their conceptual domains, their operationalizations, and a sample item are summarized in Table 1.

Sampling

---

6 The customary latent variable interaction approach of dividing cases into high and low satisfaction groups, and then comparing covariance matrices or coefficients does not enable the assessment of the strength of any moderation.

7 There is no available guidance for the specification of an interaction between a first-order latent variable and a second-order latent variable such as cost-of-exit as it was specified in Figure 1.
These measures were placed on a questionnaire and mailed to a sample of U.S. hardware retailers (Note: hardware retailers have been studied previously in Dwyer and Oh 1988, and Ping 1993-- the data sets used in these studies were not used in the present study). Hardware retailing was selected because hardware retailers= buyer-seller relationship with their primary wholesaler is typically long-term (Ping 1993), which suggests these are committed relationships where the full range of responses to relationship problems should be more likely.8

The sampling frame was the subscription list of a widely read industry publication. It contained names and addresses of senior key informants such as storeowners and managers, or senior executives. Interviews with multiple informants in a small and convenient sample from the study population revealed that hardware retailers buy from a limited set of wholesalers (typically one primary wholesaler). Although Phillips (1981) has cautioned against using single informants in general, the senior key informants in this nonrepresentative sample were judged quite knowledgeable of their primary wholesaler relationship. In addition their sentiments and perceptions were judged to be mirrored by the other informants in the firm.

Sampling involved systematic random (n-th name) selections of 100 pretest store names, and 600 final test names (with one key informant per store). The pre- and final test included a cover letter assuring informant anonymity, a $2 bill as a response incentive, and a business reply envelope, and were followed up by three postcard mailings. Minor changes to the letter, and questionnaire instructions and format (but not to the measures), were made between the pre- and final test mailings.

Pretest

The pretest responses (32) were used to assess the response rate of the survey protocol and the psychometric properties of the measures. Internal consistency of the study measures was gauged using these responses and ordered similarity coefficients (Hunter 1973) (see Gerbing and Anderson 1984b), item-to-total correlations, and coefficient alphas. The measures had coefficient alphas of .70 or above in the pretest.

---

8 In the present research 44% of the final test sample had done business with their primary wholesaler for 10 or more years. Eighteen percent of the sample had done business with their primary wholesaler for 21 years or more, 25% had done business with them for 11-20 years, 24% for 6-10 years, and 33% had done business with their primary wholesaler for 1-5 years.
Final Test

Two hundred twenty responses were usable from the final test mailing (a 36% usable response rate). The pretest responses were not combined with those from the final test because the number of pretest responses was too small to allow reliable statistical testing for equivalent samples. The psychometric properties of the measures were re-examined using the final-test responses and ordered similarity coefficients, single and multiple factor measurement models (Jöreskog 1993), and latent variable reliabilities.

Reliability and Validity

The latent variable reliabilities for satisfaction, alternative attractiveness, investment, switching cost, loyalty, voice, neglect and exit-propensity were above .82 (see Table 2). The latent variable reliabilities of cost-of-exit and the interaction were lower (.700 and .707 respectively), but within acceptable limits for our tentative inference purposes. Each latent variable was plausibly correlated with one or more other latent variables (see Table 2), which suggests construct validity, and the measures were judged to be content valid.

Most of the correlations in Table 2 were less than .6, which suggests discriminant validity for the latent variables involved. For latent variables with correlations above .6, single degree of freedom tests were performed (see Bagozzi and Phillips 1982). The results (not shown) suggested the discriminant validity of these latent variables (e.g., the largest p-value of the $\chi^2$ differences with df=1 for $H_0$: $|\text{Correlation}| = 1$ was $1.2E-09$).

Measurement and Structural Model Results

The second-order measurement model for cost-of-exit (see Figure 1), and the full measurement and structural models corresponding to Figure 2, were estimated using covariances, LISREL, maximum likelihood, and an interaction estimation technique suggested by Ping (1995) (see Appendix A for details). The results are shown in Tables 2 and 3.

The Figure 1 specification of cost-of-exit as a second-order construct fit the data (not shown) ($\chi^2 = 110/df = 51/p = .000$, GFI = .935, AGFI = .902, CFI = .975, RMSEA = .072). In addition, alternative attractiveness, investment and switching cost were judged sufficiently unidimensional based on their single construct measurement models (not shown) (e.g., $\chi^2_{\text{ALT}} = 2.73/df = 2/p = .25$, $\chi^2_{\text{INV}} = 2.47/df = 2/p = .29$, $\chi^2_{\text{SWC}} = 0.72/df = 2/p = .69$) and a full measurement model of these variables plus satisfaction, loyalty, voice, neglect and exit

---

9 Maximum likelihood estimates are robust to departures from normality, and their model fit and significance statistics may be robust to the use of a single nonnormal interaction indicator (Ping 1995, see Appendix A).
propensity (not shown) (e.g., CFI = .949, RMSEA = .055). As a result the indicators for each of the variables alternative attractiveness, investment and switching cost were averaged. Cost-of-exit was then respecified in the full measurement and structural models corresponding to Figure 2 as a first-order construct using these averaged alternative attractiveness(reverse coded), investment, and switching cost indicators. The psychometric equivalence of the Figures 1 and 2 specifications for cost-of-exit was investigated by respecifying cost-of-exit in the Figure 1 measurement model with these averaged indicators. The Figure 1 measurement model with this averaged specification of cost-of-exit suggested this and the original Figure 1 specification were psychometrically equivalent (not shown) (i.e., the measurement parameters were similar-- $\lambda_{alt} = 0.449$, $\gamma_{ALT,COE} = 0.498$, $\lambda_{inv} = 0.562$, $\gamma_{INV,COE} = 0.559$, $\lambda_{swc} = 1.000$, $\gamma_{SWC,COE} = 1.000$, $\epsilon_{alt} = 0.587$, $\zeta_{ALT} = 0.667$, $\epsilon_{inv} = 0.371$, $\zeta_{INV} = 0.371$, $\epsilon_{swc} = 0.208$, $\zeta_{SC} = 0.233$, $\phi_{Fig 1 COE} = 0.735$, $\phi_{Fig 2 COE} = 0.748$).

Although the GFI and AGFI values were low for the full measurement and structural models corresponding to Figure 2, GFI and AGFI may not be adequate for fit assessment in larger models (see Anderson and Gerbing 1984). The full measurement and structural models were judged to fit the data acceptably using other popular fit criteria (see Tables 2 and 3). For example, the Figure 2 structural model exhibited a Comparative Fit Index (Bentler 1990) of .933 (.90 or better suggests acceptable model-to-data fit-- see McClelland and Judd 1993) (see Table 3). It also exhibited a Root Mean Squared Error of Approximation (Steiger 1990) of .068 (values up to .08 suggest acceptable fit-- Brown and Cudeck 1993, Jöreskog 1993). Using the same criteria, the full measurement model corresponding to Figure 2 was also judged to fit the data (see Table 2).

**Results**

**Hypotheses**

In summary, exit-propensity was directly or indirectly associated with the other responses to relationship problems (see Tables 3 and 4), and satisfaction and cost-of-exit were associated with all the responses to relationship problems, although not always unconditionally (see Tables 3 and 5). Of the direct paths in Figure 2 involving the associations among loyalty, voice, neglect, and exit-propensity, all but the direct voice-exit-propensity association were significant. Similarly, of the paths involving satisfaction and cost-of-exit, all but the loyalty associations between satisfaction and cost-of-exit, and the cost-of-exit association with voice were significant. In addition, satisfaction moderated the cost-of-exit-loyalty association (see Table 3 and 5), and there were several indirect associations (see Table 4). As a result, all of the hypothesized associations were significant although not always direct or unconditional.
Cost-of-Exit

Cost-of-exit was a second-order construct in the study context (i.e., it fit the data). However, the loadings for cost-of-exit were different between the Figure 2 full measurement and structural models (see Tables 2 and 3), as can be expected with an exactly determined latent variable (see Anderson and Gerbing 1988, Burt 1976). Nevertheless, a Figure 2 structural model with cost-of-exit specified with indicators fixed at the Table 2 measurement model values (not shown) fit the data (e.g., CFI = .933, RMSEA = .068) and suggested the Tables 2 and 3 cost-of-exit parameterizations were interpretationally equivalent (i.e., the constrained structural model produced structural parameter estimates that were similar in direction and significance to the Table 3 results--

\[ \beta_{\text{VOLLOY}} = -0.173/t = -4.54, \beta_{\text{NEG,VOI}} = -0.377/t = -3.65, \beta_{\text{EX_P,VOI}} = 0.132/t = 1.31, \beta_{\text{EX_P,NEG}} = 0.551/t = 6.84, \beta_{\text{LOY,SAT}} = 0.108/t = -0.83, \beta_{\text{LOY,COE}} = 0.118/t = 0.74, \beta_{\text{LOY,SAT,COE}} = -0.371/t = -2.61, \beta_{\text{VOLSAT}} = 0.156/t = 2.64, \beta_{\text{VOLCOE}} = 0.077/t = 0.99, \beta_{\text{NEG,SAT}} = -0.284/t = -3.18, \beta_{\text{NEG,COE}} = -0.368/t = -3.12, \beta_{\text{EXI_PSAT}} = -0.411/t = -4.82, \beta_{\text{EXI_PCOE}} = -0.238/t = -2.01 \]

for the constrained model).

Unmodeled Paths

To further investigate the significant indirect paths not specified as direct paths in Figure 2 (see Table 4), direct paths from loyalty to neglect, loyalty to exit-propensity, and the interaction to voice, were specified in the Figure 2 structural model. The results (not shown) suggested there were no significant direct paths from loyalty to neglect, loyalty to exit-propensity, or the interaction to voice.

Alternative Models

To evaluate the direction of the direct paths between loyalty, voice, neglect, and exit-propensity in Figure 2 further, several nonrecursive or bi-directional models were estimated. The Figure 2 model with bi-directional paths between loyalty and voice, voice and neglect, and neglect and exit-propensity specified all in one model was not identified. However, models estimating one bidirectional path at a time (not shown) suggested the Figure 2 model path directions were as shown except for the NEG-EX_P path which could not be verified because that model was not identified.

Discussion

Holding Exit at Bay

These results are consistent with Hirschman=s (1970) and others= predictions that increased voice is associated with reduced exiting (see Spencer 1986, Fornell and Wernerfelt 1987). However the lack of significance in the direct voice-exit-propensity association (see Table 3) and the significant indirect association between voice and exit-propensity via neglect (see Table 4) suggest increased voice was associated with
reduced exit-propensity only via reduced neglect. Thus voice may have held exit at bay in the study only when it was less costly to use voice than to neglect the relationship. Had wholesalers made voice more costly (e.g., by ignoring complaints), and/or neglect less costly (e.g., by decreasing cost-of-exit), retailers may have been more likely to skip voice on their way to exiting.

**Associations Among the Responses**

These results are also consistent with Hirschman’s (1970) predictions concerning the associations among the responses to relationship problems. The negative signs on these relationships suggest as loyalty declined, voice was likely to increase, and as voice declined neglect and exit-propensity were likely to increase. The lack of significance in the direct loyalty-to-neglect, loyalty-to-exit-propensity, and voice-to-exit-propensity associations suggest as subject firms= loyalty declined, their use of voice was more likely to increase than their neglect or exit-propensity. It also suggests as their use of voice declined, their neglect was more likely to increase than their exit-propensity.  

**Inter-firm Relationship Development**

Firms remain in a relationship either because they want to, or because they have to (Johnson 1982, Thibaut and Kelly 1959). The sample contained dissatisfied firms in committed relationships that were willing to neglect their relationships (i.e., not care about the relationship, expend no effort to maintain the relationship, and let the relationship deteriorate). They also suggest others were planning to exit their relationships, rather than maintain and build them in anticipation of future exchanges (see Footnote 10). Such relationships may not belong in the committed phase of Dwyer, Schurr and Oh’s (1987) framework. These relationships are in decline because the subject firms do not care about their relationships and are unwilling to maintain them (i.e., neglect), and/or they are planning to leave their relationships (i.e., exit-propensity). As a result, these relationships should be classified as in either the dissolution phase of Dwyer, Schurr and Oh’s (1987) framework, or a phase between relationship commitment and dissolution.

It could be argued these relationships should be in the intrapsychic stage of relationship dissolution (see p. 2). However, dissatisfied firms that cannot leave their relationships will not go on to the other stages in relationship dissolution, and these relationships will not dissolve. For dissatisfied firms that will not leave their
relationships, the other stages of dissolution may take some time, or these relationships may not dissolve at all. Thus to emphasize the possibility these declined relationships do not belong in the committed stage, yet some may not dissolve, and for others dissolution may take considerable time, we propose there may be an additional phase between Dwyer, Schurr and Oh’s (1987) relationship commitment and relationship dissolution phases in the study context, relationship decline.

*Relationship Decline* Johnson (1982), among others (see Levinger 1976), proposed relationship commitment consisted of satisfaction and structural commitment (i.e., cost-of-exit). He also argued that understanding the implications of both components of relationship commitment was essential to understanding why individuals stay in relationships (also see Rusbult and Buunk 1993). However Johnson’s (1982) view of relationship commitment is different from the prevailing view of commitment in buyer-seller relationships (see for example Gundlach, Achrol and Mentzer 1995). Commitment in buyer-seller relationships has been defined as a stated or implied pledge of relationship continuity between partners (Dwyer, Schurr and Oh 1987). It has been conceptualized as the desire to continue a relationship and work to ensure its continuance (Wilson 1995). Further, its conceptual domain is invariably described implicitly or explicitly assuming a positive evaluation of the relationship (i.e., satisfaction). However Johnson (1982) argued the benefits derived from a relationship produce satisfaction, and thus one form of relationship commitment, but exit barriers produce structural commitment (as in Awe cannot back out now, the cost would be too great), another form of relationship commitment. As a result, a firm’s commitment to a relationship may be the result of satisfaction or structural commitment.

Because firms that were no longer satisfied, and hence no longer committed to their buyer-seller relationships in the sense Dwyer, Schurr and Oh (1987) and others intend (see Weitz and Jap 1995, Wilson 1995), may also have been unable or unwilling to exit these relationships, buyer-seller relationship development in the study context may have consisted of six phases: awareness, exploration, expansion, commitment, then *relationship decline*, and finally dissolution. Firms with relationships in the commitment phase were satisfied, and may have been loyal or vocal when there were relationship problems. Firms in relationship decline were no longer satisfied with their relationships. These firms should have been aware of their structural commitment (i.e., cost-of-exit) (Johnson 1982); they were unwilling or as yet unable to exit their relationships, and may have responded to relationship problems with neglect and exit-propensity. Firms in the relationship dissolution phase were also dissatisfied with their relationships, but they no longer should have
viewed structural commitment as a barrier to exiting.

**Interactions**

Several observed associations were contingent or dependent on the levels of interacting variables. For example satisfaction attenuated the cost-of-exit association with loyalty (see Table 5). At low levels of satisfaction the cost-of-exit association with loyalty was positive (see the COE-LOY associations in Table 5). However, as satisfaction increased to the study average, this association was weaker, and it became non significant at higher levels of satisfaction.

Satisfaction also indirectly attenuated the cost-of-exit association with voice. At low levels of satisfaction the indirect association of cost-of-exit with voice was negative rather than positive as hypothesized (see the COE-VOI associations in Table 5). As satisfaction increased to the study average and higher this association was non significant. Since increased cost-of-exit should increase dependence and decrease power (Emerson 1962), it is possible increased cost-of-exit could have reduced the likelihood of voice because it was viewed as risky (i.e., the costs outweighed the benefits). Specifically, attempts to change objectionable relationship conditions (voice) under these circumstances (i.e., lower satisfaction) might have been ignored or resisted by partner, or partner might have retaliated.

Cost-of-exit moderated the association between satisfaction and loyalty (see the SAT-LOY associations in Table 5). At low levels of cost-of-exit the satisfaction association with loyalty was positive, and as it approached the study average it became nonsignificant. However, when cost-of-exit was high this association was negative. It is possible when cost-of-exit was high, increased satisfaction decreased loyalty because the subject firms were likely to become more vocal at that point (when cost-of-exit was high increased satisfaction also increased voice-- see the SAT-VOI associations in Table 5).

**Future Research**

**Relationship Exiting**

The study results were equivocal on the likelihood of the responses to relationship problems forming a sequence or process of relationship exiting as Hirschman (1970:86) proposed (see p. 18). Additional surveys with more predictors of the responses to relationship problems, longitudinal research, experiments, and case studies should be conducted to investigate the plausibility of relationship exiting beginning with loyalty, and

---

11 In the equation \( Y = b_1X + b_2Z + b_3XZ + \zeta \) (with \( X, Z \) and \( Y \) mean centered), the association of \( Z \) with \( Y \) is determined by \( b_2 + b_3X \). Similarly, the association of \( X \) with \( Y \) is determined by \( b_1 + b_3Z \).
progress through voice to neglect and exiting. For example, additional surveys with more predictors of the responses (see the suggestions below) should be aimed at providing an identified jointly bi-directional or nonrecursive Figure 2 model of these responses. This in turn would suggest or disconfirm the possibility of an exiting process involving the responses to relationship problems.

Gundlach, Achrol and Mentzer (1995) provide an example of a longitudinal experiment involving inter-firm simulations and knowledgeable students. Similarly Rusbult, Farrell, Rogers and Mainous (1988) reported several studies that included an experiment involving scenario analysis. Students were instructed to read written scenarios in which they were to imagine they were the subjects of the experiment. The results from this scenario analysis and the other reported designs (with much more internal and external validity) were generally similar. While they used single subjects, it is likely meetings of groups of subjects could also be used.

Additional Predictors

Investigating additional predictors of the responses may be useful in several ways. Approaches to identifying exiting and neglectful firms by name should be helpful to inter-firm relationship managers. At first glance surveys might appear to be effective. However, identifying firms that may be neglectful or exiting by measuring their neglect or exit-propensity (or, any other study variable) may be difficult because of their desire for confidentiality when sensitive constructs such as these are measured. Thus predictors of neglect and exiting are needed that are publicly available and/or not sensitive so that confidentiality is not an issue, and the responding firm can be identified.

For example, firm and relationship contingency variables may be associated with neglect and exiting (or other responses). Structural contingency theory has enjoyed a central position in the organizational behavior literature (see Pfeffer 1982). There, firm behavior, and in particular its structure, is argued to be a result of contextual factors such as firm size, technology and the environment. Thus contingencies such as the number of employees in a firm and the number of competitors it faces should cause variations in that firm’s behavior (e.g., exiting, neglect, loyalty, or voice). These variables may also include the number of employees a firm has, their revenue, the number of years they have been in business, the number of years they have done business with their partner firm, and productivity measures (see Ingene 1982).

Variables such as those used in organizational demography could also be efficacious (e.g., average employee age, education, length of service, etc.) (see Pfeffer 1983). If it turned out, for example, that number of employees was positively associated with neglect, relationship managers could determine their suppliers’
and customers= number of employees and target the comparatively smaller firms for neglect reduction.

Little is known about loyalty in inter-firm relationships, and its predictors are largely unknown. Hirschman (1970) mentioned there were differences in sensitivity to relationship problems. As a result, loyalty may also have predictors that include the magnitude, frequency and relevance of relationship problems, and the partner firm=s history of solving problems without the subject firm=s involvement.

Similarly, much work remains to be done in understanding voice in these relationships. Hirschman (1970) argued voice was affected by the expectation of its success. He proposed this involved the subject=s evaluation of the prospects of the declined firm getting back on track through that firm=s actions, the subject=s actions, or the actions of others. Hirschman (1970) also argued voice was affected by the advantage to be gained by using voice. Singh (1990) conceptualized this advantage in a consumer context as the worthwhileness of complaint, the costs versus the benefits to the subject. Hirschman (1970) also argued industry structure should affect voice. Specifically he proposed that in what he termed loose monopolies there should be little voice. Andreasen (1985) characterized loose monopolies as industries in which a near-monopoly exists, and he proposed physicians, for example, are a loose monopoly. Finally, Hirschman (1970) proposed the importance of the purchase would also increase voice. This suggests the importance of the relationship to the subject firm may also increase their voice.

Exit-Propensity

It is plausible exit-propensity is itself a process in inter-firm relationships, as Mobley (1977) argued for employees, and there may be one or more feedback loops within an exit-propensity process that nonrecursively (i.e., bi-directionally) affect neglect. For example, it is plausible that after planning to exit begins, neglect could increase as the subject firm draws nearer to physically exiting a relationship. It is also plausible neglect may be affected by the subject=s discontinuing the exiting process (e.g., for lack of an acceptable alternative). This level of detail was beyond the scope of the present research, but there may be more to learn about exit-propensity as a series of interrelated stages with plausible feedback loops to neglect.

Exit was operationalized as exit-propensity in the study because exit is a dichotomous variable, and such variables can produce estimation problems in covariant structure analysis (see Footnote 1). Thus the relationships between the study variables and exit may be smaller than those observed with exit-propensity. Longitudinal studies linking the Figure 2 model with exit it would therefore be useful to observe the study variables= linkages with the physical termination of inter-firm relationships.
Interactions

As it turned out, the present study missed the full extent of the role of cost-of-exit (COE) in the study context. The results of investigating additional interactions suggested there were other cost-of-exit interactions in the Figure 2 model.\(^{12}\) For example we found while COE did not affect the association between satisfaction and voice (t= -0.06) or exit (t= 1.39), it attenuated the satisfaction-neglect association (t= 2.04). Specifically as COE increased, the satisfaction-neglect association became weaker until at high cost-of-exit satisfaction was not associated with neglect.

COE also attenuated the voice-exit-propensity relationship (t= -2.34) (it did not significantly affect the other relationships among the responses). As COE increased the association between voice and exit-propensity became weaker. At low cost-of-exit the voice-exit association was positive and significant. As cost-of-exit increased this association weakened until it became nonsignificant at the study average. Then it became negative and significant at high cost-of-exit. Thus as voice declined, neglect was more likely at all levels of cost-of-exit. Exit was less likely at low cost-of-exit (because the effort of exit-propensity was not necessary). It was no more or less likely near the study average (when it was nonsignificant), and more likely at high cost-of-exit (when the effort of exit-propensity was quite necessary). Consequently, there may also be more to learn about the role of cost-of-exit in holding exit at bay.

References

\(^{12}\) We thank two reviewers of an early version of the paper for comments that led to the investigation of these interactions.


Hunter, John E. (1973), "Methods for Reordering the Correlation Matrix to Facilitate Visual Inspection and Preliminary


Management Journal, 31 (September), 599-627.


Webster, Fredrick E., Jr. (1979), Industrial Marketing Strategy, New York: John Wiley and Sons, Inc.


Table 1

<table>
<thead>
<tr>
<th>Construct</th>
<th>Conceptual Definition</th>
<th>Conceptual Domain</th>
<th>Operational Definition</th>
<th>Sample Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction (SAT)</td>
<td>A global evaluation of relationship fulfillment.</td>
<td>Overall rating of the relationship; an appraisal of the attributes of the relationship that are rewarding, profitable, or instrumental.</td>
<td>Belief that the relationship is satisfactory.</td>
<td>All in all, my relationship with my primary wholesaler is very satisfactory (s1).</td>
</tr>
<tr>
<td>Alternative Attractiveness</td>
<td>A global evaluation of the relationship fulfillment available in the best available alternative relationship.</td>
<td>An overall evaluation of the most salient and available alternative relationship, and generalized perceptions of the rewards available in that relationship.</td>
<td>The satisfaction believed to be available in the best alternative relationship, - above that available in the current relationship.</td>
<td>In general, I would be __ satisfied with the alternative wholesaler than/as I am with the current wholesaler. a. Much more  b. Slightly more  c. About the same  d. Slightly less  e. Much less (a1)</td>
</tr>
<tr>
<td>(reverse coded as ALTR)</td>
<td></td>
<td></td>
<td></td>
<td>Overall I have invested a lot in the relationship with the current wholesaler (i1).</td>
</tr>
<tr>
<td>Investment (INV)</td>
<td>The cost to build and maintain the current relationship in anticipation of future exchanges.</td>
<td>Economic (e.g., money), activity (e.g., effort), and opportunity costs (e.g., time).</td>
<td>The magnitude of the cost that went into building and maintaining the current relationship.</td>
<td>Considering everything, the costs to stop doing business with the current wholesaler and start up with the alternative wholesaler would be high (sc1).</td>
</tr>
<tr>
<td>Switching Cost (SWC)</td>
<td>The cost to change to an alternative relationship.</td>
<td>Economic, activity, and opportunity costs to end the current relationship and secure an alternative relationship, and the psychic cost to achieve this end.</td>
<td>The cost and loss that would be required to terminate the current relationship and secure an alternative relationship.</td>
<td>Alternative unattractiveness (the construct ALTR), Investment (INV), and Switching Cost (SWC).</td>
</tr>
<tr>
<td>Cost-of-Exit (COE)</td>
<td>The perceived magnitude of the mobility barrier between the incumbent and the alternative relationships.</td>
<td>The attractiveness of the alternative relationship, the relationship-specific investments (i.e., economic, activity, and opportunity costs that helped ensure future exchanges) which might be lost or obsoleted by exiting, and switching costs (i.e., economic, opportunity, activity and psychic costs to terminate the current relationship, and startup a new one).</td>
<td>The satisfaction believed to be available in the best alternative relationship, - above that available in the current relationship, plus the cost and loss involved in switching relationships.</td>
<td></td>
</tr>
<tr>
<td>Loyalty (LOY)</td>
<td>Abiding relationship problems in silence with confidence that things will get better.</td>
<td>Viewing problems as transitory phenomena that fix themselves; from the subject= perspective, problems work themselves out or are fixed by others, so the subject ignores them.</td>
<td>The predisposition to overlook problems because they fix themselves.</td>
<td>I often overlook problems with my primary wholesaler because they frequently fix themselves (l1).</td>
</tr>
<tr>
<td>Voice (VOI)</td>
<td>Constructive attempts by the subject firm to change objectionable relationship conditions.</td>
<td>Actively seeking problem removal by contacting the partner firm in a positive (i.e., relationship preserving) manner, and cooperatively discussing and working with the partner firm to improve the situation.</td>
<td>The intention to notify constructively and work with the primary wholesaler to solve relationship problems.</td>
<td>Occasionally I will suggest changes to my primary wholesaler if there is a mutual problem (v1).</td>
</tr>
<tr>
<td>Neglect (NEGL)</td>
<td>Allowing the relationship to deteriorate.</td>
<td>Not caring about the relationship, expending no effort to maintain the relationship, and willingness to let the relationship deteriorate.</td>
<td>Planning to do nothing to improve conditions in the relationship.</td>
<td>If things are not right with my primary wholesaler I sometimes consider letting the relationship die a slow death (n1).</td>
</tr>
<tr>
<td>Exit-Propensity (EX_P)</td>
<td>The disinclination to continue the current relationship.</td>
<td>Thinking of exiting, intention to search for alternatives, evaluating alternatives, and the intention to exit.</td>
<td>Planning to leave the relationship.</td>
<td>Occasionally I will think about ending the business relationship with my primary wholesaler (e1).</td>
</tr>
<tr>
<td>Satisfaction-Cost-Exit Interaction (SATxCOE)</td>
<td>The moderation of the Cost-of-Exit effect on other variables by Satisfaction.</td>
<td>Changes in Satisfaction increase or decrease the size of the Cost-Exit structural coefficients.</td>
<td>Satisfaction times Cost-Exit.</td>
<td>s: c = [(s1+s2+s3 +s4 + s5)(altr + inv + sct)/3], where altr = (~1 + ~2 + ~3 + ~4 (~5, are reverse coded indicator of ALT so altr would load positively on COE), inv = (i1+i2+i3+i4)/4, swc = (sc1+sc2+sc3+sc4)/4.</td>
</tr>
</tbody>
</table>

Note: The formulas and calculations provided in the table are for illustrative purposes and may not reflect the exact implementation in the study. The symbols and variables used in the formulas are placeholders and should be replaced with the actual data and calculations from the study.
Shown for completeness only.

...05 suggests close fit, .051

Maximum likelihood.

... attenuated standard deviations are pr

from Figure 1 Measurement Model.

Attenuated values (estimating latent variable means with an interaction creates severe estimation problems

... attenuation is due to... see Jöreskog and Yang 1996)

... GFI and AGFI may be inadequate for fit assessment in larger models (see Anderson and Gerbing 1984).

... From Figure 1 Measurement Model.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>( \lambda_{1} )</td>
<td>1.000</td>
<td>( \lambda_{3} )</td>
<td>1.000</td>
<td>( \theta_{G1} )</td>
<td>0.436</td>
<td>( \theta_{G3} )</td>
</tr>
<tr>
<td>( \lambda_{2} )</td>
<td>0.832</td>
<td>( \lambda_{4} )</td>
<td>0.994</td>
<td>( \theta_{G3} )</td>
<td>0.261</td>
<td>( \theta_{G4} )</td>
</tr>
<tr>
<td>( \lambda_{3} )</td>
<td>0.810</td>
<td>( \lambda_{5} )</td>
<td>0.960</td>
<td>( \theta_{G4} )</td>
<td>0.648</td>
<td>( \theta_{G5} )</td>
</tr>
<tr>
<td>( \lambda_{4} )</td>
<td>0.695</td>
<td>( \lambda_{6} )</td>
<td>0.915</td>
<td>( \theta_{Gv1} )</td>
<td>0.032</td>
<td>( \theta_{G6} )</td>
</tr>
<tr>
<td>( \lambda_{5} )</td>
<td>0.974</td>
<td>( \lambda_{1} )</td>
<td>0.939</td>
<td>( \theta_{Gv2} )</td>
<td>0.061</td>
<td>( \theta_{G1} )</td>
</tr>
<tr>
<td>( \lambda_{6} )</td>
<td>0.864</td>
<td>( \lambda_{2} )</td>
<td>0.884</td>
<td>( \theta_{Gv3} )</td>
<td>0.042</td>
<td>( \theta_{G2} )</td>
</tr>
<tr>
<td>( \lambda_{7} )</td>
<td>1.000</td>
<td>( \lambda_{3} )</td>
<td>1.000</td>
<td>( \theta_{Gv4} )</td>
<td>0.067</td>
<td>( \theta_{G3} )</td>
</tr>
<tr>
<td>( \lambda_{8} )</td>
<td>0.877</td>
<td>( \lambda_{4} )</td>
<td>0.798</td>
<td>( \theta_{Gn1} )</td>
<td>0.125</td>
<td>( \theta_{G4} )</td>
</tr>
<tr>
<td>( \lambda_{9} )</td>
<td>1.000</td>
<td>( \lambda_{5} )</td>
<td>0.896</td>
<td>( \theta_{Gn2} )</td>
<td>0.103</td>
<td>( \theta_{G5} )</td>
</tr>
<tr>
<td>( \lambda_{10} )</td>
<td>0.735</td>
<td>( \lambda_{atr} )</td>
<td>0.971</td>
<td>( \theta_{Gn3} )</td>
<td>0.189</td>
<td>( \theta_{Gatr} )</td>
</tr>
<tr>
<td>( \lambda_{11} )</td>
<td>0.699</td>
<td>( \lambda_{atr} )</td>
<td>0.725</td>
<td>( \theta_{Gn4} )</td>
<td>0.062</td>
<td>( \theta_{Gatr} )</td>
</tr>
<tr>
<td>( \lambda_{12} )</td>
<td>0.876</td>
<td>( \lambda_{swc} )</td>
<td>1.000</td>
<td>( \theta_{Gc1} )</td>
<td>0.522</td>
<td>( \theta_{Gswc} )</td>
</tr>
<tr>
<td>( \lambda_{13} )</td>
<td>0.866</td>
<td>( \lambda_{cc} )</td>
<td>0.812</td>
<td>( \theta_{Gc2} )</td>
<td>0.188</td>
<td>( \theta_{Gc,c} )</td>
</tr>
<tr>
<td>( \lambda_{14} )</td>
<td>0.842</td>
<td>( \theta_{G1} )</td>
<td>0.165</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Fit Statistics:**

- Chi-Square Statistic Value: 625
- Chi-Square Degrees of Freedom: 305
- p-Value of Chi-Square Value: .000
- Steiger (1990) RMS Error of Approximation (RMSEA): .069
- Bentler (1990) Comparative Fit Index: .933
- GFI*: .835
- AGFI*: .795
- RMS Residual: .048

**COE Indicator** Latent Variable Covariances and Correlations:

<table>
<thead>
<tr>
<th>Latent Variable Covariances and Correlations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latent Variable</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>1. ALT</td>
</tr>
<tr>
<td>2. INV</td>
</tr>
<tr>
<td>3. SWC</td>
</tr>
</tbody>
</table>

* Covariances on and below the diagonal, correlations above.

* Attenuated values (estimating latent variable means with an interaction creates severe estimation problems- see Jöreskog and Yang 1996) (attenuated standard deviations are presented for completeness- disattenuated values can be computed from the disattenuated variances shown to the left).

* \( \lambda_i \) = indicators of LOY (Loyalty), etc. (see Table 1 and Figure 2).

* Maximum likelihood.

* .05 suggests close fit, .051-.08 suggests acceptable fit (Brown and Cudeck 1993, Jöreskog 1993).

* Shown for completeness only—GFI and AGFI may be inadequate for fit assessment in larger models (see Anderson and Gerbing 1984).

* From Figure 1 Measurement Model.

* t-value > 2.
Table 3
FIGURE 2 STRUCTURAL MODEL ESTIMATION RESULTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate^a</th>
<th>Parameter</th>
<th>Estimate^a</th>
<th>Parameter</th>
<th>Estimate^a</th>
<th>Parameter</th>
<th>Estimate^a</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(\lambda_{l1})</td>
<td>1.000</td>
<td>(\lambda_{s2})</td>
<td>0.881</td>
<td>(\theta_{e_{i4}})</td>
<td>0.061</td>
<td>(\phi_{SAT,COE})</td>
<td>0.352*</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{l2})</td>
<td>0.831</td>
<td>(\lambda_{s3})</td>
<td>1.000</td>
<td>(\theta_{e_{i1}})</td>
<td>0.521</td>
<td>(\phi_{SAT,SATxCOE})</td>
<td>-0.175*</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{l3})</td>
<td>0.808</td>
<td>(\lambda_{s4})</td>
<td>0.795</td>
<td>(\theta_{e_{i2}})</td>
<td>0.187</td>
<td>(\phi_{COE,SAT,COE})</td>
<td>-0.128*</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{l4})</td>
<td>0.693</td>
<td>(\lambda_{s5})</td>
<td>0.893</td>
<td>(\theta_{e_{i3}})</td>
<td>0.109</td>
<td>(\zeta_{LOY})</td>
<td>0.610*</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v1})</td>
<td>0.974</td>
<td>(\lambda_{s6})</td>
<td>0.850</td>
<td>(\theta_{e_{i5}})</td>
<td>0.194</td>
<td>(\phi_{SAT,SATxCOE})</td>
<td>-0.128*</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v2})</td>
<td>0.864</td>
<td>(\lambda_{s7})</td>
<td>0.711</td>
<td>(\theta_{e_{i6}})</td>
<td>0.129</td>
<td>(\zeta_{EX,P})</td>
<td>0.255*</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v3})</td>
<td>1.000</td>
<td>(\lambda_{s8})</td>
<td>0.805</td>
<td>(\theta_{e_{i7}})</td>
<td>0.152</td>
<td>(\beta_{VOI,LOY})</td>
<td>-0.035</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v4})</td>
<td>0.877</td>
<td>(\lambda_{s9})</td>
<td>0.668</td>
<td>(\theta_{e_{i8}})</td>
<td>0.103</td>
<td>(\beta_{VOI,LOY})</td>
<td>-0.017</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v5})</td>
<td>0.736</td>
<td>(\lambda_{s10})</td>
<td>0.436</td>
<td>(\theta_{e_{i9}})</td>
<td>0.120</td>
<td>(\beta_{NEGL,VOI})</td>
<td>-0.413</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v6})</td>
<td>0.698</td>
<td>(\lambda_{s11})</td>
<td>0.262</td>
<td>(\theta_{e_{i10}})</td>
<td>0.167</td>
<td>(\beta_{EX,P,VOI})</td>
<td>0.089</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v7})</td>
<td>0.977</td>
<td>(\lambda_{s12})</td>
<td>0.649</td>
<td>(\theta_{e_{i11}})</td>
<td>0.126</td>
<td>(\beta_{LOY,SAT})</td>
<td>-0.067</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v8})</td>
<td>0.867</td>
<td>(\lambda_{s13})</td>
<td>0.061</td>
<td>(\theta_{e_{i12}})</td>
<td>0.150</td>
<td>(\beta_{LOY,COE})</td>
<td>0.036</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v9})</td>
<td>0.843</td>
<td>(\lambda_{s14})</td>
<td>0.042</td>
<td>(\theta_{e_{i13}})</td>
<td>0.092</td>
<td>(\beta_{LOY,SATxCOE})</td>
<td>-0.309</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v10})</td>
<td>1.000</td>
<td>(\lambda_{s15})</td>
<td>0.125</td>
<td>(\theta_{e_{i14}})</td>
<td>0.540*</td>
<td>(\beta_{SAT})</td>
<td>0.197</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v11})</td>
<td>0.960</td>
<td>(\lambda_{s16})</td>
<td>0.072</td>
<td>(\theta_{e_{i15}})</td>
<td>0.510*</td>
<td>(\beta_{COE})</td>
<td>0.001</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v12})</td>
<td>0.916</td>
<td>(\lambda_{s17})</td>
<td>0.190</td>
<td>(\theta_{e_{i16}})</td>
<td>0.400*</td>
<td>(\beta_{EX,P,SAT})</td>
<td>-0.334</td>
<td></td>
</tr>
<tr>
<td>(\lambda_{v13})</td>
<td>0.936</td>
<td>(\lambda_{s18})</td>
<td>0.190</td>
<td>(\theta_{e_{i17}})</td>
<td>0.352*</td>
<td>(\beta_{EX,P,COE})</td>
<td>-0.345</td>
<td></td>
</tr>
</tbody>
</table>

Fit Statistics:
- Chi-Squared Statistic Value: 633
- Chi-Square Degrees of Freedom: 310
- p-Value of Chi-Squared Value: .000
- Bentler (1990) Comparative Fit Index: .933
- Steiger (1990) RMS Error of Approximation (RMSEA)^d: .068
- GFI^e: .833
- AGFI^e: .797
- RMS Residual: .045

Squared Multiple Correlation:
- LOY: .054
- VOI: .197
- NEGL: .445
- EX_P: .672

^a \(\lambda_i\) = indicators of LOY (Loyalty), etc. (see Table 1 and Figure 2).
^b Maximum likelihood.
^c \(\beta_{VOI,LOY}\) is the effect of LOY on VOI.
^d .05 suggests close fit, .051-.08 suggests acceptable fit (Brown and Cudeck 1993, Jöreskog 1993).
^e Shown for completeness only-- GFI and AGFI may be inadequate for fit assessment in larger models (see Anderson and Gerbing 1984).
^* t-value > 2.
Table 4
TRIMMED Figure 2 Model Standardized Indirect and Total Effects (Associations)\textsuperscript{b,c}

**Standardized Indirect Effects (Associations)\textsuperscript{d,e}:**

<table>
<thead>
<tr>
<th></th>
<th>LOY</th>
<th>VOI</th>
<th>NEGL</th>
<th>EX\textsubscript{P}</th>
<th>SAT</th>
<th>COE</th>
<th>SAT\texttimes{}COE</th>
</tr>
</thead>
<tbody>
<tr>
<td>VOI</td>
<td></td>
<td>0.019</td>
<td>-0.10</td>
<td>0.076</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEGL</td>
<td>0.078</td>
<td></td>
<td>-0.091</td>
<td>0.007</td>
<td>-0.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EX\textsubscript{P}</td>
<td>0.031</td>
<td>-0.99</td>
<td></td>
<td></td>
<td>-0.129</td>
<td>-0.143</td>
<td>0.007</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Standardized Total Effects (Associations)\textsuperscript{e}:**

<table>
<thead>
<tr>
<th></th>
<th>LOY</th>
<th>VOI</th>
<th>NEGL</th>
<th>EX\textsubscript{P}</th>
<th>SAT</th>
<th>COE</th>
<th>SAT\texttimes{}COE</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOY</td>
<td></td>
<td>-0.061</td>
<td>0.033</td>
<td>0.243</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOI</td>
<td>-0.312</td>
<td>0.363</td>
<td>0.030</td>
<td>0.076</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEGL</td>
<td>0.078</td>
<td>0.251</td>
<td>0.327</td>
<td>0.362</td>
<td>0.019</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EX\textsubscript{P}</td>
<td>0.031</td>
<td>-0.99</td>
<td>0.396</td>
<td>0.96</td>
<td>-0.394</td>
<td>-0.439</td>
<td>0.007</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\textsuperscript{a} The Figure 2 structural model was re-estimated with the nonsignificant (NS) VOI-EX\textsubscript{P} path fixed at zero. With this path free the indirect EX\textsubscript{P} association with LOY was NS, and the total EX\textsubscript{P} associations with LOY and VOI were NS.

\textsuperscript{b} LOY = Loyalty, COE = Cost-of-Exit, etc. (see Table 1 and Figure 2).

\textsuperscript{c} The table is read from column to row (e.g., the indirect effect of VOI on EX\textsubscript{P} is -0.103).

\textsuperscript{d} Stability Index = 0.625

\textsuperscript{e} t-values are shown in parentheses.
Table 5
SATISFACTION (SAT)-COST-OF-EXIT (COE) INTERACTION STATISTICAL SIGNIFICANCE

<table>
<thead>
<tr>
<th>SAT Value</th>
<th>COE Coeficient</th>
<th>SAT Coeficient</th>
<th>COE SE of SAT</th>
<th>SAT SE of COE</th>
<th>t-Value</th>
<th>t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.20</td>
<td>0.95</td>
<td>0.38</td>
<td>2.49</td>
<td>1.83</td>
<td>0.44</td>
<td>0.20</td>
</tr>
<tr>
<td>2</td>
<td>0.70</td>
<td>0.29</td>
<td>2.40</td>
<td>2</td>
<td>0.39</td>
<td>0.19</td>
</tr>
<tr>
<td>3</td>
<td>0.39</td>
<td>0.19</td>
<td>2.03</td>
<td>3</td>
<td>0.08</td>
<td>0.12</td>
</tr>
<tr>
<td>4</td>
<td>0.08</td>
<td>0.14</td>
<td>0.61</td>
<td>3.5</td>
<td>-0.06</td>
<td>0.12</td>
</tr>
<tr>
<td>4.16g</td>
<td>0.03</td>
<td>0.13</td>
<td>0.26</td>
<td>4</td>
<td>-0.22</td>
<td>0.15</td>
</tr>
<tr>
<td>5</td>
<td>-0.22</td>
<td>0.17</td>
<td>-1.26</td>
<td>5</td>
<td>-0.53</td>
<td>0.25</td>
</tr>
</tbody>
</table>

SAT-VOI (Voice) (Indirect) Assoc. COE-VOI (Voice) (Indirect) Assoc.

<table>
<thead>
<tr>
<th>SAT Value</th>
<th>COE Coeficient</th>
<th>SAT Coeficient</th>
<th>COE SE of SAT</th>
<th>SAT SE of COE</th>
<th>t-Value</th>
<th>t-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.83</td>
<td>0.12</td>
<td>0.05</td>
<td>2.19</td>
<td>1.20</td>
<td>-0.16</td>
<td>0.06</td>
</tr>
<tr>
<td>2</td>
<td>0.12</td>
<td>0.05</td>
<td>2.36</td>
<td>2</td>
<td>-0.11</td>
<td>0.05</td>
</tr>
<tr>
<td>3</td>
<td>0.18</td>
<td>0.05</td>
<td>3.09</td>
<td>3</td>
<td>-0.06</td>
<td>0.06</td>
</tr>
<tr>
<td>3.5g</td>
<td>0.20</td>
<td>0.06</td>
<td>3.24</td>
<td>4</td>
<td>-0.01</td>
<td>0.07</td>
</tr>
<tr>
<td>4</td>
<td>0.23</td>
<td>0.07</td>
<td>3.29</td>
<td>4.16g</td>
<td>-0.00</td>
<td>0.07</td>
</tr>
<tr>
<td>5</td>
<td>0.28</td>
<td>0.08</td>
<td>3.25</td>
<td>5</td>
<td>0.03</td>
<td>0.08</td>
</tr>
</tbody>
</table>

*a* The values ranged from 1.2 (=low) to 5 in the study.

*b* The coefficient of COE is given by (.036-.309SAT)COE with SAT mean centered.

*c* The Standard Error (SE) of the COE coefficient is given by

\[
\sqrt{\text{Var}(b_{\text{COE}} + b_{\text{SAT} \times \text{COE}})} = \sqrt{\text{Var}(b_{\text{COE}}) + \text{Var}(b_{\text{SAT} \times \text{COE}}) + 2 \text{SAT} \times \text{Cov}(b_{\text{COE}}, b_{\text{SAT} \times \text{COE}})}
\]

*d* The values ranged from 1.83 (=low) to 5 in the study.

*e* The coefficient of SAT is given by (.208+.052COE)SAT with COE mean centered.

*f* The Standard Error (SE) of the SAT coefficient is given by

\[
\sqrt{\text{Var}(b_{\text{SAT}} + b_{\text{SAT} \times \text{COE}})} = \sqrt{\text{Var}(b_{\text{SAT}}) + \text{Var}(b_{\text{SAT} \times \text{COE}}) + 2 \text{COE} \times \text{Cov}(b_{\text{SAT}}, b_{\text{SAT} \times \text{COE}})}
\]

*g* Mean value.

*h* The coefficient of SAT is given by (.208+.052COE)SAT with COE mean centered (Table 4 shows standardized coefficients).

*i* The coefficient of COE is given by (.005+.052SAT)COE with SAT mean centered (Table 4 shows standardized coefficients).

/j* Approximate.
**Figure 1**
COST-OF-EXIT (COE) MEASUREMENT MODEL*

\[ \gamma = \text{ALTR} \]

\[ \lambda = \text{INV} \]

\[ \text{ALTR} \]

\[ \text{INV} \]

\[ \text{SWC} \]

\[ \text{COE} \]

---

* ALTR = ALT with \( \sim \) reverse coded to produce positive loadings on ALTR, INV = Investment, etc. (see Table 1).

**Figure 2**
PROPOSED STRUCTURAL MODEL (Simplified)*

\[ \text{SATxCOE}^b \quad \text{LOY} \]

\[ \text{VOI} \]

\[ \text{NEGL} \]

\[ \text{EX_P} \]

---

* SAT, LOY, VOL, NEG, EX_P were specified with their respective indicators. SAT, COE (Cost-of-Exit) and SATxCOE were correlated, and the measurement errors (\( \varepsilon = s \)) and structural disturbances (\( \zeta \)) were uncorrelated.

\[ s:c = \left[ \frac{(s_1+s_2+s_3+s_4)}{4} \right] \left[ \frac{\text{altr + inv + swc}}{3} \right]. \]

\[ \text{altr} = \left( \frac{-1+1+1+1}{4} \right), \text{inv} = \left( \frac{i_1+i_2+i_3+i_4}{4} \right), \text{swc} = \left( \frac{sc_1+sc_2+sc_3+sc_4}{4} \right) \text{ (sim)} \]
Appendix A  Latent Variable Interaction Specification Using a Single Indicator

The following summarizes the seminal paper on these matters, Kenny and Judd (1984), then it summarizes an alternative technique proposed by Ping (1995) that was used in the present research.

Kenny and Judd (1984) proposed for latent variables X and Z with multiple indicators x, and z, the interaction XZ could be specified using all possible product indicators xz. However, this technique has proven difficult for researchers to implement (Aiken and West 1991). While LISREL 8 reduces the effort involved using constraint equations, interaction specification still requires considerable effort (Jöreskog and Yang 1996). In addition, many indicator and dummy variables result producing large matrices that may create model estimation problems (Ping 1995).

The resulting measurement and structural models for an interaction are per se nonnormal because products of indicators (i.e., xz) are nonnormal (Kenny and Judd 1984). While maximum likelihood parameter estimates are robust to departures from normality (see the citations in Ping 1995), their model fit and significance statistics may not be (Bollen 1989). However model fit and significance statistics may be robust to the addition of a few (nonnormal) product indicators (i.e., four or fewer) (Jaccard and Wan 1995; Ping 1995).

The Ping (1995) technique is attractive because it requires a single (nonnormal) product indicator for an interaction. Under the Kenny and Judd (1984) normality assumptions, (i.e., the latent variables X and Z with indicators x, and z are independent of the error terms for their indicators e, i, and j, the error terms are independent of each other, and x, and z, e, i, and j are normally distributed) an interaction can be specified with one indicator that is the product of sums of the indicators of the linear latent variables. For example the indicator for XZ, comprised of X and Z with indicators x, x, z, j, and z, respectively, would be xz = (x1+x2)(z1+z2), or, if equivalently sized elements in the resulting covariance matrix are desired, xz = [(x1+x2)/2][(z1+z2)/2]. The loading and error variance of xz are given by

\[
\lambda_{xz} = \Gamma_{xz} \theta_{z} \\
\theta_{xz} = \Gamma_{xz}^2 \text{Var}(X) \theta_{z} + \Gamma_{xz} \text{Var}(Z) \theta_{x} + \theta_{x} \theta_{z},
\]

where \(\lambda_{xz}\) is the loading of xz on XZ, \(\theta_{xz}\) is the variance of the error term (\(\varepsilon_{xz}\)) for xz, \(\text{Var}(a)\) is the variance of a, and for equivalently sized elements, \(\Gamma_{X} = (\lambda_{x1} + \lambda_{x2})/2, \theta_{X} = (\text{Var}(\varepsilon_{x1}) + \text{Var}(\varepsilon_{x2}))/2^2, \Gamma_{Z} = (\lambda_{z1} + \lambda_{z2})/2, \) and \(\theta_{Z} = (\text{Var}(\varepsilon_{z1}) + \text{Var}(\varepsilon_{z2}))/2^2\) (see Ping 1995). The loading and error variance of xz could then be specified subject to the constraint equations A1 and A2 using LISREL 8.

For example, the loading and error of s.c (= [(s1+s2+s3+s4+s5)/5][(alt + inv + swc)/3], see Figure 2), the single indicator of SATxCOE are given by

\[
\lambda_{sc} = \Gamma_{SAT} \Gamma_{COE} \\
\theta_{sc} = \Gamma_{SAT}^2 \text{Var}(SAT) \theta_{COE} + \Gamma_{COE}^2 \text{Var}(COE) \theta_{SAT} + \theta_{SAT} \theta_{COE},
\]

where \(\lambda_{sc}\) is the loading of s.c on SATxCOE, \(\theta_{sc}\) is the variance of the error term (\(\varepsilon_{sc}\)) for s.c, \(\text{Var}(a)\) is the variance of a, \(\Gamma_{SAT} = (\lambda_{s1} + \ldots + \lambda_{s5})/5, \theta_{SAT} = (\text{Var}(\varepsilon_{s1}) + \ldots + \text{Var}(\varepsilon_{s5}))/5^2, \Gamma_{COE} = (\text{alt + inv + swc)/3}, \) and \(\theta_{COE} = (\text{Var}(\varepsilon_{alt}) + \text{Var}(\varepsilon_{inv}) + \text{Var}(\varepsilon_{swc}))/3^2\).

Each indicator of the independent and dependent variables in the study was centered by subtracting the indicator’s average from its value in each case (centering independent variables is important to reduce collinearity, and centering dependent variables is important to compensate for not estimating intercepts—see Jöreskog and Yang 1996). The value for the interaction=s single-indicator s.c was added to each case. Next the structural model was specified using PAR variables (Jöreskog and Sörbom, 1993b:14) and constraint equations (Jöreskog and Sörbom, 1993b:11) for \(\Gamma_{SAT}, \Gamma_{COE}, \theta_{SAT}, \) and \(\theta_{COE}.\) Constraint equations (CO statements) were written for equations A3 and A4 using PAR variables, \(\text{Var}(SAT), \) and \(\text{Var}(COE)),\) and the variance of the interaction (= \(\text{Var}(SAT)^*\text{Var}(COE) + \text{Cov}(SAT,COE)^2\)) then the structural model was estimated using maximum likelihood. The use of PAR variables in this manner is sensitive to the sequence and location of the PAR and CO statements in the LISREL program. In general PAR=s should not be used recursively (Jöreskog and Sörbom 1993b:13). In this application they are used recursively, and appeared at the end of the program. In addition, the PAR variables and the variables constrained in the CO statements were defined in their natural numerical order (e.g., PAR(1), PAR(2), etc.), and a PAR variable was used in a CO statement as soon after it was defined as possible. Starting values for the loading, error and variance terms of the interaction were estimated using a measurement model involving all the variables except the interaction. The resulting measurement parameters estimates were substituted into equations A3 and A4 to produce a starting value for \(\lambda_{sc}\) and \(\theta_{sc}\) (see Ping 1995). The starting values for the structural coefficients were estimated using regression.
VOICE IN BUSINESS-TO-BUSINESS RELATIONSHIPS:
COST-OF-EXIT AND DEMOGRAPHIC ANTECEDENTS

Robert A. Ping, Jr.
Department of Marketing
College of Business Administration
Wright State University
Dayton, OH 45435
513-873-3047

The author thanks several anonymous reviewers for their comments on an earlier version of this article.
VOICE IN BUSINESS-TO-BUSINESS RELATIONSHIPS:
COST-OF-EXIT AND DEMOGRAPHIC ANTECEDENTS

ABSTRACT

Because voice may play an important role in the maintenance of business-to-business relationships, the paper investigates its antecedents. After summarizing what is known about voice in an inter-firm context, the paper proposes that a firm’s voice is affected by their cost to exit the relationship, their overall relationship satisfaction, and demographic variables. These proposals are tested in a field survey, and while satisfaction and the cost to exit the relationship were stronger predictors of voice than the demographic variables, the results suggest that several partner firm demographic variables could be useful to relationship managers interested in the maintenance of business-to-business relationships via partner firm voice cultivation. Because these demographic variables are less sensitive (i.e., partner firms are likely to provide this information without insisting on their anonymity), they could be used to identify partner firms by name that are likely to be non-vocal when they are experiencing relationship problems.

INTRODUCTION

Ping (1993) proposed that alternatives to exiting committed business-to-business relationships when there are relationship problems included loyalty (remaining silent, confident that things will get better), voice (constructive attempts by the subject to change objectionable relationship conditions), and neglect (allowing the relationship to deteriorate) (also see Hirschman 1970; Rusbult, Zembrodt and Gunn 1982). This suggests that partner firms may or may not use voice when they are experiencing relationship problems. Thus in the management of important buyer-seller relationships (e.g., JIT relationships, strategic alliances, and other relationships in which high levels of partner cooperation is desired), voice cultivation and maintenance, and the identification of nonvocal partner firms (by name) that are experiencing relationship problems, should be important relationship maintenance tasks. It bears emphasizing that exchange relationship problems are known to the offended firm but not necessarily to the offending firm (Hirschman 1970). In the absence of their voice or some other means of identifying them, offended customers remain unidentified, remediation of their problem(s) is therefore less likely, and the likelihood of their exiting the relationship is increased (Fornell and Wernerfelt 1987; Hirschman 1970).

Hirschman (1970) proposed that when there are relationship problems, the subject should become more vocal when overall relationship satisfaction or the cost to exit the relationship is high (e.g., the alternative relationship is unattractive, or investment in the relationship or switching cost is high). In the single empirical
article addressing voice in a business-to-business context, Ping (1993) reported that firm voice was increased by their overall relationship satisfaction and their investment in the relationship. However, the voice relationship with the attractiveness of the alternative relationship approached positive significance (i.e., as alternative attractiveness increased voice increased, rather than decreased), and the voice relationship with switching cost was not significant (also see Rusbult et al. 1982 and Rusbult et al. 1988 for similar results).

While loyal firms are believed likely to eventually respond to relationship problems with voice (Hirschman 1970), they should be identified for remediation of any relationship problems because some may simply exit the relationship when they experience chronic relationship problems (i.e., they may never respond to relationship problems with voice) (Hirschman 1970). Firms that are neglecting their relationship should also be identified for problem remediation because they may be taking from their relationship, rather than investing in it and giving to the relationship in anticipation of future exchanges (Dwyer, Schurr and Oh 1987).

However, the problem of identifying nonvocal partner firms with relationship problems (by name) is not solved efficiently by assuming all nonvocal firms have problems (the number of nonvocal relationships could be large-- see page 14). Neither is it solved by conducting partner firm surveys that measure sensitive variables such as their satisfaction, their cost to exit the relationship, relationship problems, loyalty, neglect, etc. (partner firms are likely either to not respond to surveys involving variables they deem sensitive unless their anonymity is assured, or they are likely to provide inaccurate information). As a result, relationship managers cannot easily separate partner firms without relationship problems from those that are likely to be experiencing relationship problems because of the sensitivity of the information required to do so.

**Objectives and Contribution**

Thus the empirical picture of voice as a response to satisfaction and the dimensions of the cost to exit in business-to-business relationships is murky at best. In addition, business-to-business relationship managers cannot easily separate nonvocal relationships without relationship problems from those that may have relationship problems. As a result, an objective of the present research is to help clarify the extant interfirm voice research. We will argue that the cost to exit an interfirm is appropriately captured in a second-order concept, cost-of-exit, that has as its Aindicators” the first order concepts alternative attractiveness, relationship
investment, and switching cost. We will then show that firm voice is increased by their cost-of-exit, as Hirschman (1970) maintained.

A second objective of this research is to investigate less sensitive antecedents of voice (i.e., more likely to be reported by partner firms without insisting on their anonymity) such as partner firm demographic variables (e.g., partner firm revenue and number of employees). Assuming firms experience relationship problems that are unknown to their partners, and that it is possible for partners to remediate these problems, these variables should be useful in relationship maintenance because they have the potential of identifying firms by name that are likely to be persistently nonvocal when there are relationship problems.

The study contributes to several literatures, including interfirm relationship marketing and marketing practice. For example, the study fills a gap in the reactions-to-dissatisfaction literature by providing a clearer understanding of several voice antecedents. The study also contributes to the emerging relationship marketing literature by identifying demographic antecedents of voice that should be useful in determining individual partner firms likely to be nonvocal when there are relationship problems. Finally, authors have called for research such as this on reactions to problems in buyer-seller relationships (Dwyer, Schurr and Oh 1987; Ping and Dwyer 1988).

VOICE

Hirschman (1970) pointed out that customer voice and exit alert a firm to its failings. In business-to-business relationships voice may also signal the importance the vocal firm attaches to the relationship (Hirschman 1970). Partner firm voice may also signal that they want remediation of their relationship problems, they believe this is possible (Hirschman 1970), and they are willing to work to effect this end (Ping 1993). Hirschman (1970) argued that voice should be likely for customers that view the current relationship as superior to the alternative relationship, and this likelihood should increase as the gap between the alternative and the current relationship as it was widens.

Not surprisingly authors have recommended that firms should provide mechanisms to increase customer voice. Hirschman (1970) argued this can be done by reducing the cost and increasing the rewards of voice, and by raising the cost and reducing opportunities for exit (p. 123) (see also Hirschman 1974, p. 8). Others have
argued deterministically that complaints should be encouraged; they can be used to increase market share and lower the cost of obtaining new customers (see Fornell and Wernerfelt 1987, p. 345).

**Voice Research**

Voice has been investigated in the interpersonal relationships literature (Rusbult, Johnson and Morrow 1986; Rusbult et al. 1982), and the employment relations literature (Farrell 1983; Rosse and Hulin 1985; Rusbult et al. 1988; Rusbult and Lowery 1985; Spencer 1986).

Voice has also been investigated in the Marketing literature (Andreasen 1985; Fornell and Didow 1980; Fornell and Wernerfelt 1987; Fornell and Westbrook 1984; Ping 1993; Singh 1990a, 1990b). For example, Ping (1993) reported that in channel relationships, firm voice was positively associated with their overall satisfaction with the relationship and their investment in that relationship. In that study the attractiveness of their alternative relationship approached *positive* significance in its association with voice (*t* = 1.92), and their switching cost was *not* associated with their voice (*t* = .59).

**The Present Research**

Given its potential for relationship maintenance, the voice research streams in other literatures, and the single study of voice in a business-to-business context, with its unexpected results in light of Hirschman's (1970) predictions, our empirical knowledge of interfirm voice seems limited. In the balance of the paper we will argue that the cost to exit an interfirm relationship is a second-order concept that has as its indicators the latent variables alternative attractiveness, relationship investment, and switching cost. We will also propose that this cost-of-exit should be positively associated with voice, as Hirschman (1970) argued. In addition, we will replicate the positive voice association with satisfaction reported by Ping (1993) and others (see Rusbult et al. 1982; Rusbult 1988). Further, because relationship managers interested in relationship maintenance have no predictors of voice that can be used to identify individual partner firms likely to be nonvocal when there are relationship problems, we will propose several firm demographic variables that should be associated with their voice, such as partner firm revenue, years with partner, years in business, number of employees, revenue per employee, competition, and return on investment. Finally we will describe and interpret a field survey of these antecedents of voice in a retailer-supplier context.
**HYPOTHESES**

*Cost-of-Exit*

Authors have noted that parties remain in an exchange relationship because they either want to, or have to (see Hirschman 1970; Johnson 1982; Levinger 1979; Ping 1993; Rusbult 1980; Rusbult et al. 1982; Rusbult et al. 1988). Authors have used the term structural commitment in connection with having to remain in a relationship, and argued that the dimensions of structural commitment included alternative attractiveness, investment, and switching cost (see Ping 1993; Johnson 1982; Levinger 1979). This suggests the existence of a second-order structural commitment construct which we will term cost-of-exit, with indicators” alternative attractiveness, investment and switching cost.

Jöreskog (1970) introduced the notion of a (confirmatory) second-order construct, which can be conceptualized as a latent or unobserved variable with no observed variables as indicators (see COST-OF-EXIT in Figure 1). Instead, a second-order construct has other latent variables for indicators,” hence the term Asecond-order.” Each of these Aindicator” latent variables has observed variables for indicators, and as a result these latent variables are termed first-order constructs in this situation (see Gerbing and Anderson 1984a; Rindskopf and Rose 1988). In particular cost-of-exit should have the indicators” alternative attractiveness, investment and switching cost, which in turn have their respective observed indicators.

Hirschman (1970) argued that voice should substitute for exiting when the cost of exiting a relationship is high. He and others (see Rosse 1988) have proposed that subjects should choose the least costly option in response to relationship problems. When the cost of exiting is high (i.e., the subject firm lacks an attractive alternative, and there are high relationship investment and switching cost), a less costly reaction to relationship problems such as voice should appear more attractive than exit. High levels of cost-of-exit should make economic exchanges with the partner firm more valuable (Dwyer, Schurr and Oh 1987; Frazier 1983; Thibaut and Kelley 1959). As a result, cost-of-exit should make the firm less likely to be passive when there are relationship problems, and it should increase voice because there is much to lose if the unresolved problems lead to relationship dissolution.

In summary,

**H1a:** Cost-of-exit is a second order construct with indicators” alternative attractiveness, investment and switching cost,
H1b: Increasing cost-of-exit fosters an increased likelihood of voice.

**Satisfaction**

In business-to-business relationships, overall relationship satisfaction should also make an exchange relationship more valuable, and thereby increase the likelihood of voice when there are relationship problems. To explain, Ping (1993) proposed the existence of two types of satisfaction in interfirm relationships, event and overall satisfaction. He maintained that, while it is dissatisfaction with a relationship event that triggers a reaction, it is the level of overall relationship satisfaction that determines which reaction will be emitted (e.g., exit, voice, etc.). He proposed that increases in the level of overall satisfaction with the exchange relationship should also make economic exchanges with the partner firm more valuable (Dwyer, Schurr and Oh 1987; Frazier 1983; Thibaut and Kelley 1959). As overall relationship satisfaction increases, the firm should respond positively to relationship problems by preferring to work with the partner firms to resolve problems (voice) (Hirschman 1970, Rosse and Hulin 1985, Rusbult et al. 1982, Rusbult et al. 1988), to help preserve the relationship. Thus, we hypothesize that,

**H2:** As satisfaction increases voice is more likely.

**Revenue**

Besides variables such as overall satisfaction and cost-of-exit, firm and relationship demographic variables should also be associated with voice. In particular the revenue a firm derives from economic exchanges with its partner firm should make economic exchanges with this partner firm more valuable (Dwyer, Schurr and Oh 1987; Frazier 1983; Thibaut and Kelley 1959). As their revenue increases, the firm should respond positively to relationship problems by preferring to work with the partner firms to resolve problems (voice) and thereby help ensure their future revenue because there is much to lose if unresolved relationship problems lead to relationship termination. Hence we hypothesize that,

**H3:** Increasing revenue makes voice more likely.

**Competition**

The number of competitors in a firm's market is plausibly related to that firm's revenues and return on investment. Economic theory predicts that in maturing markets, as the number of competitors increases, each competitor's revenue and return on investment should decrease (Chamberlin 1933).
In addition, because we have also proposed that revenue and return on investment are likely to increase voice, the effect of competitors should indirectly affect voice. In particular, the number of competitors should negatively affect voice via revenue and return on investment. Thus, we hypothesize that,

H4a: An increase in the number of competitors promotes lower revenue and return on investment, and

H4b: An increase in the number of competitors indirectly produces a decreased likelihood of voice.

**ROI and Revenue per Employee**

In interviews conducted with a convenient sample of distributors and retailers regarding their business-to-business relationships we noticed that several firms were quick to bring relationship problems to the attention of their exchange partner. Many of these firms also focused on efficiency in their business, and were very aware of productivity measures such as revenue per employee and return on investment (see Ingene 1982). For these reasons, we expected that more productive firms would be more inclined to use voice when there were problems in the exchange relationship. As a result,

H5: With increasing return on investment and revenue per employee voice becomes more likely.

**Number of Employees**

In the interviews we also noticed that firms with many employees were more involved with their primary business-to-business partner firm, and were more likely to be vocal when there were relationship problems. This result is predicted by perspective theory (Ostrom and Upshaw 1968), which proposes that subjects should be influenced to be more extreme in their opinions when the range or perspective (Upshaw 1969) of opinions to which they are exposed is wide (see Ostrom 1970). With many employees, higher cost responses to relationship problems (than doing nothing) such as voice and exit should be more likely to be discussed, and the likelihood of a voice or exit response to relationship problems should therefore be increased. However because voice is less costly than exit and has a probabilistic reward (Kahneman and Teversky 1979), it should be more likely than exit. For this reason, we anticipated that the number of employees should positively affect voice, and firms with many employees would be more inclined to exercise the voice option when there were problems in the exchange relationship. Formally,

H6: An increase in the number of retailer employees makes voice more likely.

**Years in Business**
Voice should also be affected by how long the firm has been in business. Firms that have been in business for many years should be more knowledgeable of alternative exchange partners, and more experienced in dealing with the category of firms represented by their exchange partner (Dwyer, Schurr and Oh 1987). Because this knowledge may be a source of countervailing power (Dwyer 1980), these firms should be less dependent on their exchange partner (Emerson 1962). This in turn should make them more willing to change exchange partners, and therefore less willing to expend the effort involved in using voice (Hirschman 1970). As a result,

H7: As the number of years the firm has been in business increases voice is less likely.

**Years with Partner**

On the other hand, the length of time the firm has done business with an exchange partner should make future business together likely. In long-lived economic exchange relationships, relationship specific investments should have increased, commitment should have grown, and there should be a pressure to adjust rather than dissolve the exchange relationship (Dwyer, Schurr and Oh 1987; Macneil 1980), which should increase the likelihood of voice. Formally,

H8: As the number of years the firm has done business with their exchange partner increases voice becomes more likely.

These associations are summarized in Figure 1. The balance of this article presents the results of a test of these associations involving hardware retailers and their primary wholesalers.

**MEASURES**

Voice, satisfaction, alternative attractiveness, investment, and switching cost were measured using the balanced five-point Likert measures developed by Ping (1993). The conceptual and operational definitions plus sample items from the scales for these variables are shown in Table 1.

The firm and relationship demographic variables in the study were measured primarily with open-ended questions. For example retailer revenue was measured with an item asking for the retailer's prior year revenue (see Table 1). Revenue per employee for each retailer was computed by dividing their revenue by the number of their employees, and return on investment was measured using a forced choice scale. Table 1 also shows these measures.
The study population was U. S. hardware retailers. The sampling frame chosen for this population was the subscription list of a popular hardware retailing trade publication that was representative of the study population. The key informant within the hardware retailer sampling unit was the store owner, manager or executive. Although Phillips (1981) has cautioned against using single informants in general, the interviews indicated hardware retailers typically buy from one primary wholesaler, and senior key informants were very knowledgeable of that relationship. In addition, their sentiments and perceptions were strongly mirrored by the other informants in the firm.

The pre-test and final test samples were selected using systematic random (n-th name) sampling and resulted in one hundred pretest retailer addresses, and six hundred final test addresses. The survey questionnaire was mailed to these pretest and final test samples, and three post card follow-ups in the final test produced two hundred four usable questionnaires (34%).

RESULTS

Reliability and Validity

The psychometric properties of the latent variable measures were examined using the final test responses and coefficient alpha calculations, ordered similarity coefficients (Hunter 1973), multiple group analysis (Anderson, Gerbing and Hunter 1987), and single factor analysis (Jöreskog 1993). The final test measures were judged to be unidimensional, and internally and externally consistent. For example, they displayed latent variable reliabilities greater than .80, and average extracted variances of .58 or above (Fornell and Larker 1981) (see Tables 2 and 3).

The measures for the latent variables were judged to be content valid. In addition, the Average Variance Extracted for the latent variables suggested convergent and discriminant validity for these measures (Fornell and Larker 1981) (see Tables 2 and 3). The latent variables also were judged to be construct valid; they were significantly and plausibly correlated with at least one other study variable (see Table 3).
Measurement and Structural Model Results

The measurement and structural models corresponding to Figure 1 were estimated using LISREL 8 and maximum likelihood estimation. These measurement and structural models appeared to fit the data, based on the Comparative Fit Index (Bentler 1990) and the Root Mean Squared Error of Approximation (Steiger 1990) (see Tables 3 and 4). In addition, the second-order measurement model for cost-of-exit appeared to fit the data based on the same criteria (see Table 2).

Hypotheses Tests

The study hypotheses received mixed support (see Table 4). The cost-of-exit hypotheses, the hypothesized voice relationships with satisfaction and number of employees, and the indirect revenue-voice effect were as hypothesized. However, the revenue-voice effect, the number of competitors-revenue effect, and the number of competitors-voice effect were significant but opposite in sign from that which was hypothesized; and the balance of the hypothesized effects were not significant.

In particular, the number of competitors positively affected revenue, instead of negatively. As a result revenue negatively affected voice rather than positively.

DISCUSSION

Cost-of-Exit

Retailers with a high perceived cost to exit the incumbent wholesaler relationship were also likely to use voice when there were relationship problems. The direct cost-of-exit effect on voice was almost the same as the satisfaction-voice effect in this context (see Table 4). This suggests that satisfaction and cost-of-exit may play equal roles in encouraging voice in the study context (however see the total effect of cost-of-exit in the next paragraph).

Alternative Attractiveness, Investment and Switching Cost

In previous research alternative attractiveness, investment and switching cost have been specified as directly affecting voice (see Ping 1993; Rusbult et al. 1982; Rusbult et al. 1988). Unfortunately a respecification of the Figure 1 model that included the Figure 1 paths plus paths to voice from alternative attractiveness, investment, and switching cost was not identified. However, the results from a respecification of Figure 1 that added a single path to voice from alternative attractiveness (not reported) suggested that alternative attractiveness positively affected voice (t = 2.37), which is consistent with prior research (see Ping
1993; Rusbult et al. 1982; Rusbult et al. 1988). Nevertheless, Hirschman (1970) argued that those with diminished alternatives were likely to use voice (p. 52 and 53), as previously mentioned. To explain these apparently inconsistent results, decreased alternative attractiveness may have increased the subject firms' perception of dependence on their partner firm (Emerson 1962), and increased their perception that there would be more to lose by complaining than there would be to gain. However reduced alternative attractiveness was also likely to have been the result of increased cost-of-exit, and increased cost-of-exit was likely to increase voice. The resulting total effect of cost-of-exit (i.e., the positive direct effect of cost-of-exit on voice plus the negative indirect cost-of-exit effect via alternative attractiveness) was positive and significant (see the next paragraph), which suggests that although alternative attractiveness and cost-of-exit appear to affect voice in opposite directions, decreased alternative attractiveness because of increased cost-of-exit was likely to increase voice.

Parenthetically, the standardized total effect of cost-of-exit on voice was smaller than the standardized satisfaction-voice effect ($\gamma_{VOLSAT} = .28$, Total$\gamma_{VOL,COE} = .18$). While the direct effects of satisfaction and cost-of-exit were similar (see Table 4), this suggests that satisfaction may have a larger overall effect on voice than cost-of-exit. In addition, using the single path specification approach just described, voice was not directly associated with investment or switching cost (not reported).

**Number of Retailer Employees**

Retailers with more employees were also more likely to use voice. As discussed previously this result could be explained by perspective theory, which predicts that when the range of opinions to which they are exposed is wide, subjects should be more extreme in their opinions. For firms with many employees, higher cost responses to relationship problems (than doing nothing) such as voice and exit may have been discussed, and, because voice is less costly than exit and has a probabilistic reward, voice responses may have been the result.

**Retailer Revenue**

Retailers with higher revenue were also more likely to use voice. It is plausible that higher revenue retailers were more valuable to wholesalers in the study. As a result, these retailers may have received more unsolicited consideration and attention, and experienced better problem resolution efforts, and they may not have needed to resort to voice often.

**Number of Competitive Stores**
The number of competitive stores positively affected revenue. One explanation for this result might be that increased competition may have increased the level of promotion in the study retailers’ service areas. This in turn may have increased primary demand for hardware in these service areas. This could have lead to increased revenue for all the retailers in these areas, and in particular the study retailers. However, it is also plausible that in competitive markets, only the larger hardware retailers may have survived.

Combining the paths between the number of competitive stores and voice (the competitive stores-revenue-voice path) produced the hypothesized indirect negative effect on voice. This indirect effect of the number of competitive stores on voice was significant, and suggests that as the number of competitive stores increased, voice declined. As we have already speculated, an explanation for this result could be that competitive markets contain larger retailers, and these larger retailers may have been less likely to use voice.

*Years with the Wholesaler*

Years with the wholesaler was positively correlated with satisfaction and cost-of-exit. This suggests that long-lived wholesaler-retailer relationships were associated with increased satisfaction and higher cost-of-exit as Dwyer, Schurr and Oh (1987) and others predict. Because satisfied firms and those with high cost-of-exit in turn were likely to be more vocal, this implies that years with the wholesaler was positively (but indirectly) associated with voice. This in turn suggests that longer-lived retailer-wholesaler relationships were associated with higher levels of voice via satisfaction and cost-of-exit. However because this relationship involves correlations, it is not the case that longer-lived relationships (indirectly) make voice more likely, only that they somehow positively covary.

*IMPLICATIONS*

While generalizing from a single study is risky, assuming the cultivation of voice is as desirable as it appears, the study results suggest that wholesalers interested in relationship maintenance may want to maintain or increase retailer satisfaction and retailer cost-of-exit, and encourage voice from their newer retailer relationships, retailers with higher revenue, and retailers with fewer employees. These retailers were either less likely to use voice, or they were associated with reduced voice in the study.

*Satisfaction*

Overall satisfaction had the largest overall effect on voice in the study. For relationship managers interested in relationship maintenance who may prefer to concentrate on only a few relationship factors, overall
satisfaction maintenance and its improvement may be the best defensive strategy to cultivate retailer voice.

In addition, it is likely that favorable resolution of relationship problems would increase the overall satisfaction of the retailers involved (Fornell and Wernerfelt 1987, Frazier 1983, Thibaut and Kelly 1959), and in turn should increase the likelihood of their voice in the future (see Ping 1993). This plausible circle of overall satisfaction, problem recognition, voice, problem resolution, and increased overall satisfaction may also reduce relationship neglect and exiting (Ping 1993), and should help strengthen the relationship (Dwyer, Schurr and Oh 1987; Frazier 1983).

Cost-of-Exit

The study results suggest that increasing retailer cost-of-exit is likely to increase their voice. While the direct effect of cost-of-exit on voice was equivalent to that of satisfaction, its total effect was less than satisfaction because alternative attractiveness positively affected voice. Nevertheless, wholesalers interested in relationship maintenance may wish to increase retailer cost-of-exit to help stimulate retailer voice. Wholesaler-sponsored proposals that increase mobility barriers, such as retailer investment in such areas as employee training, and switching costs, such as contracts and pledges (Anderson and Weitz 1992), and incentives such as cumulative discounts (i.e., discounts calculated on year-to-date orders), may produce the additional benefit of increasing retailer voice.

Encouraging Voice

Recalling Ping’s (1993) remarks regarding satisfaction with a relationship event versus overall relationship satisfaction, increased overall retailer satisfaction may be accomplished one event at a time, and to increase overall relationship satisfaction, the percentage of satisfactory relationship events should be increased so that it is noticed by the retailer. To increase retailer cost-of-exit in the study context, alternative attractiveness could be manipulated by for example publicity involving the return of unhappy defectors (as AT&T is currently doing), additional retailer investments in the relationship could be actively merchandized, and switching costs could be increased with cumulative discounts for example.

Authors have also suggested directly soliciting complaints and working to resolve them (e.g., providing 800 numbers, and quick and competent complaint processing) (Hirschman 1970, 1974; Fornell and Wernerfelt 1987). Further, authors have argued that voice is affected by the expectation of the success of voice, the advantage to be gained by using voice (i.e., the costs versus the benefits to the subject), the importance of the
relationship to the subject firm, and voice response style (e.g., no response to an irate response-- see Singh 1990b). For these reasons, wholesalers interested in relationship maintenance may wish to consider additional means of increasing retailer voice such as publicizing successful retailer outcomes resulting from their use of voice, and having wholesaler sales reps actively solicit retailer voice in retailing firms that might be likely to be persistently non-vocal (i.e., newer relationships, retailers in competitive areas, and those with higher revenue or fewer employees) (For example in subsequent contact with the interview firms, one supplier had assumed that all non-vocal customers had relationship problems by instructing sales reps to solicit relationship problems from all nonvocal customers. Because most of their customers were non-vocal, we suggested they experiment with encouraging voice in their newer customers, and customers in competitive markets, with higher revenue, or fewer employees. Some of the ideas resulting from their internal contest to identify voice generating ideas included supplier executives visiting customer executives to identify and solicit relationship problems, customer-council board meetings at non-vocal customer locations with an invitation to the non-vocal customer host to participate in the board meetings, and lotteries involving problems submitted by nonvocal customers).

**FUTURE RESEARCH**

Much work remains to be done in understanding voice. The squared multiple correlation (R² = .27) for voice observed in this study suggests that it has other antecedents in the study context. As previously mentioned Hirschman (1970) argued that voice should be affected by the expectation of the success of voice, the advantage to be gained by using voice (see Banfield 1961, Singh 1990a), the importance of the relationship to the subject firm, and the availability of mechanisms to communicate complaints inexpensively and effectively should increase voice.

There may also be other firm demographic variables that are related to their voice (see Pfeffer 1983 for a summary of organizational demographic variables). Hirschman (1970) also argued that industry structure should affect voice (we thank an anonymous reviewer for suggesting this plausible antecedent of voice). Specifically he proposed that in what he termed loose monopolies there should be little voice. Andreasen (1985) characterized loose monopolies as industries in which a near-monopoly exists, and he proposed that physicians, for example, are a loose monopoly. Based on Hirschman's (1970) argument, it is plausible that industry structure is also an antecedent of voice.
REFERENCES


Fornell, Claes and Nicholas M. Didow (1980), "Economic Constraints on Consumer Complaining Behavior,"


<table>
<thead>
<tr>
<th>Construct</th>
<th>Conceptual Definition</th>
<th>Operational Definition</th>
<th>Items</th>
<th>Sample Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice (VOI)</td>
<td>Constructive attempts to change objectionable relationship conditions. Relationship problems.</td>
<td>Intention to notify constructively and work with the primary wholesaler to solve related problems.</td>
<td>4</td>
<td>I will try to discuss any primary-wholesaler related problems with them.</td>
</tr>
<tr>
<td>Satisfaction (SAT)</td>
<td>Global evaluation of relationship fulfillment.</td>
<td>Belief that the relationship is satisfactory.</td>
<td>5</td>
<td>All in all, my relationship with my primary wholesaler is very satisfactory.</td>
</tr>
<tr>
<td>Alternative Attractiveness (ALT)</td>
<td>Global evaluation of the relationship fulfillment available in the best available alternative relationship.</td>
<td>Satisfaction believed to be available in the best alternative relationship.</td>
<td>4</td>
<td>Overall the alternative wholesaler would be a much better company to do business with than the current wholesaler.</td>
</tr>
<tr>
<td>Investment (INV)</td>
<td>Cost to build and maintain the current relationship in anticipation of future exchanges.</td>
<td>Magnitude of the cost that went into building and maintaining the current relationship.</td>
<td>4*</td>
<td>A lot of energy, time and effort have gone into building and maintaining the relationship with the current wholesaler.</td>
</tr>
<tr>
<td>Switching Cost (SWC)</td>
<td>Costs to change to an alternative relationship.</td>
<td>Cost and loss required to terminate the current relationship and secure an alternative relationship.</td>
<td>4</td>
<td>Generally speaking the costs in time, money, effort and grief to switch primary wholesalers would be high.</td>
</tr>
<tr>
<td>Years with Wholesaler (YRS)</td>
<td>Number of years the retailer has done business with the supplier.</td>
<td>How many years have you done business with your primary wholesaler?</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Years in Business (OPN)</td>
<td>Number of years the retailer has been in business.</td>
<td>How many years has your store been open?</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Employees (EMP)</td>
<td>Retailer's number of employees.</td>
<td>The number of employees at your store?</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Revenue (REV)</td>
<td>Retailer's revenue.</td>
<td>Your last year's sales?</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Competitors (CMP)</td>
<td>Number of competitive stores in retailer's service area.</td>
<td>The number of competing stores in your service area?</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ROI</td>
<td>Retailer return on investment.</td>
<td>Last year’s return on investment was (circle one)</td>
<td>1</td>
<td>a. negative\n</td>
</tr>
<tr>
<td>Revenue/ Revenue per employee (R/E)</td>
<td>Revenue divided by number of employees.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The uniqueness item in Ping's (1993) scale was deleted to attain internal consistency. The deletion was based on an examination of the fit statistics available in a single factor analysis, and content validity. The deletion substantially improved internal consistency, and did not appear to impair content validity.*
Table 2
COST-OF-EXIT MEASUREMENT MODEL RESULTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Parameter&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Estimate&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Parameter</th>
<th>Estimate&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\lambda_1$</td>
<td>0.92</td>
<td>$\lambda_{sc1}$</td>
<td>1.00</td>
<td>$\epsilon_{i2}$</td>
<td>0.12</td>
</tr>
<tr>
<td>$\lambda_2$</td>
<td>0.90</td>
<td>$\lambda_{sc3}$</td>
<td>0.96</td>
<td>$\epsilon_{i3}$</td>
<td>0.08</td>
</tr>
<tr>
<td>$\lambda_3$</td>
<td>1.00</td>
<td>$\gamma_{ALT,COE}$</td>
<td>-0.61*</td>
<td>$\epsilon_{i4}$</td>
<td>0.12</td>
</tr>
<tr>
<td>$\lambda_4$</td>
<td>0.77</td>
<td>$\gamma_{INV,COE}$</td>
<td>0.89</td>
<td>$\epsilon_{o1}$</td>
<td>0.29</td>
</tr>
<tr>
<td>$\lambda_1$</td>
<td>0.85</td>
<td>$\gamma_{SCT,COE}$</td>
<td>0.86</td>
<td>$\epsilon_{o2}$</td>
<td>0.20</td>
</tr>
<tr>
<td>$\lambda_2$</td>
<td>0.94</td>
<td>$\epsilon_{a1}$</td>
<td>0.27</td>
<td>$\epsilon_{o3}$</td>
<td>0.17</td>
</tr>
<tr>
<td>$\lambda_3$</td>
<td>1.00</td>
<td>$\epsilon_{a2}$</td>
<td>0.24</td>
<td>$\epsilon_{o4}$</td>
<td>0.20</td>
</tr>
<tr>
<td>$\lambda_4$</td>
<td>0.94</td>
<td>$\epsilon_{a3}$</td>
<td>0.07</td>
<td>$\zeta_{ALT}$</td>
<td>0.67</td>
</tr>
<tr>
<td>$\lambda_{sc1}$</td>
<td>0.89</td>
<td>$\epsilon_{a4}$</td>
<td>0.24</td>
<td>$\zeta_{INV}$</td>
<td>0.23</td>
</tr>
<tr>
<td>$\lambda_{sc2}$</td>
<td>0.97</td>
<td>$\epsilon_{a1}$</td>
<td>0.45</td>
<td>$\zeta_{SCT}$</td>
<td>0.48</td>
</tr>
<tr>
<td>$\phi_{COE}$</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fit Indices<sup>c</sup>:
- Chi-Square Statistic Value: 143
- Chi-Square Degrees of Freedom: 57
- p-Value of Chi-Square Value: .00
- Bentler (1990) Comparative Fit Index<sup>c</sup>: .96
- GFI: .90
- AGFI: .86
- Steiger (1990) RMS Error of Approximation (RMSEA)<sup>d</sup>: .08
- p-value RMSEA < .05: .00

Average Variance Extracted: .58
Latent Variable Reliability: .80

---

<sup>a</sup> Maximum likelihood.
<sup>b</sup> COE = Cost-of-Exit, etc. (see the definitions in Table 1).
<sup>c</sup>.90 or better indicates acceptable model-to-data fit (see McClelland and Judd 1993).
<sup>d</sup> Values up through .08 indicate acceptable model-to-data fit (Brown and Cudeck 1993, Jöreskog 1993).
* While it is customary to reverse code an indicator that loads negatively on a concept (see for example Dwyer and Oh 1987), it is not required.
### Table 3
MEASUREMENT MODEL ESTIMATION RESULTS

#### Latent Variable Covariances

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Satisfaction</td>
<td>.51*</td>
<td>(not specified)</td>
<td>.30*</td>
<td>.11</td>
<td>.06</td>
<td>.02</td>
<td>- .00</td>
<td>- .00</td>
<td>- .08</td>
<td>.04</td>
<td>.59*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Alt. Attract.</td>
<td>d</td>
<td>.85*</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
</tr>
<tr>
<td>3. Investment</td>
<td>d</td>
<td>d</td>
<td>.60*</td>
<td>d</td>
<td>(not specified)</td>
<td>d</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Switching Cost</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>d</td>
<td>.96*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Voice</td>
<td>.09</td>
<td>.18*</td>
<td>.00</td>
<td>.00</td>
<td>.10</td>
<td>- .07</td>
<td>- .04</td>
<td>- .01</td>
<td>- .06</td>
<td>.33*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Years With</td>
<td>.98</td>
<td>- .02</td>
<td>148.09*</td>
<td>.40*</td>
<td>.09</td>
<td>.14*</td>
<td>.00</td>
<td>.01</td>
<td>.20*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Open</td>
<td>1.29</td>
<td>.03</td>
<td>132.40</td>
<td>726.83*</td>
<td>.06</td>
<td>.06</td>
<td>.05</td>
<td>- .01</td>
<td>- .06</td>
<td>- .08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Employees</td>
<td>.23</td>
<td>.61</td>
<td>14.81</td>
<td>24.03</td>
<td>173.58*</td>
<td>.51*</td>
<td>.39*</td>
<td>- .02</td>
<td>.00</td>
<td>.22*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Revenue</td>
<td>.09</td>
<td>(not specified)</td>
<td>- .50</td>
<td>19.22</td>
<td>26.99</td>
<td>109.41</td>
<td>263.81*</td>
<td>.19*</td>
<td>.01</td>
<td>- .07</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Competitors</td>
<td>.08</td>
<td>.22</td>
<td>22.11</td>
<td>18.47</td>
<td>.40</td>
<td>44.27</td>
<td>157.25*</td>
<td>.00</td>
<td>.05</td>
<td>- .13</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. ROI</td>
<td>.16</td>
<td>- .01</td>
<td>.05</td>
<td>- 1.16</td>
<td>.80</td>
<td>.80</td>
<td>.19</td>
<td>6.57*</td>
<td>- .01</td>
<td>- .15*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Revenue/E</td>
<td>.19</td>
<td>- .19</td>
<td>1.04</td>
<td>- 11.94</td>
<td>.00</td>
<td>8.61</td>
<td>4.79</td>
<td>- .17</td>
<td>48.01*</td>
<td>.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Cost-of-Exit</td>
<td>.45</td>
<td>(not specified)</td>
<td>.15</td>
<td>2.51</td>
<td>- 2.38</td>
<td>3.00</td>
<td>.89</td>
<td>- 1.70</td>
<td>- .40</td>
<td>.16</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Fit Indices

- **Chi-Squared Statistic Value**: 485
- **Chi-Squared Degrees of Freedom**: 309
- **p-Value of Chi-Squared Value**: .00
- **Bentler (1990) Comparative Fit Index**: .96
- **GFI**: .86
- **AGFI**: .82
- **Steiger (1990) RMS Error of Approximation (RMSEA)**: .05
- **p-value RMSEA < .05**: .47

#### Average Variance Extracted

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Variance Extracted</td>
<td>.77</td>
<td>.77</td>
<td>.74</td>
<td>.80</td>
<td>.75</td>
</tr>
</tbody>
</table>

#### Latent Variable Reliabilities

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latent Variable Reliabilities</td>
<td>.94</td>
<td>.93</td>
<td>.92</td>
<td>.94</td>
<td>.93</td>
</tr>
</tbody>
</table>

---

*See Table 4 for the loadings and error variances.

* Covariances on and below the diagonal, correlations above.

* Maximum likelihood.

* Not specified.

* .90 or better indicates acceptable model-to-data fit (see McClelland and Judd 1993).

* Shown for completeness only-- GFI and AGFI may be inadequate for fit assessment in larger models (see Anderson and Gerbing 1984).

* Values up through .08 indicate acceptable model-to-data fit (Brown and Cudeck 1993, Jöreskog 1993).

* t-value greater than 2.
### Table 4
STRUCTURAL MODEL ESTIMATION RESULTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>Parameter b</th>
<th>Estimate</th>
<th>Parameter b</th>
<th>Estimate</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\lambda_{a1}$</td>
<td>0.79</td>
<td>$\lambda_{a4}$</td>
<td>1.00</td>
<td>$\epsilon_{a4}$</td>
<td>0.21</td>
<td></td>
</tr>
<tr>
<td>$\lambda_{a2}$</td>
<td>0.88</td>
<td>$\gamma_{ALT,COE}$</td>
<td>-0.61</td>
<td>$\epsilon_{v1}$</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>$\lambda_{a3}$</td>
<td>1.00</td>
<td>$\gamma_{INV,COE}$</td>
<td>0.89</td>
<td>$\epsilon_{v2}$</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>$\lambda_{a4}$</td>
<td>0.88</td>
<td>$\gamma_{SCT,COE}$</td>
<td>0.86</td>
<td>$\epsilon_{v3}$</td>
<td>0.06</td>
<td></td>
</tr>
<tr>
<td>$\lambda_{a5}$</td>
<td>0.93</td>
<td>$\epsilon_{s1}$</td>
<td>0.16</td>
<td>$\epsilon_{v4}$</td>
<td>0.04</td>
<td></td>
</tr>
<tr>
<td>$\lambda_{a1}$</td>
<td>0.92</td>
<td>$\epsilon_{s2}$</td>
<td>0.13</td>
<td>$\phi's$</td>
<td>d</td>
<td></td>
</tr>
<tr>
<td>$\lambda_{a2}$</td>
<td>0.90</td>
<td>$\epsilon_{s3}$</td>
<td>0.10</td>
<td>$\zeta_{VOI}$</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td>$\lambda_{a3}$</td>
<td>1.00</td>
<td>$\epsilon_{s4}$</td>
<td>0.11</td>
<td>$\zeta_{REV}$</td>
<td>253.40</td>
<td></td>
</tr>
<tr>
<td>$\lambda_{a4}$</td>
<td>0.78</td>
<td>$\epsilon_{s5}$</td>
<td>0.10</td>
<td>$\zeta_{ROI}$</td>
<td>6.57</td>
<td></td>
</tr>
<tr>
<td>$\lambda_{s1}$</td>
<td>0.85</td>
<td>$\epsilon_{i1}$</td>
<td>0.26</td>
<td>$\gamma_{VOLSAT}$</td>
<td>0.28</td>
<td>3.26</td>
</tr>
<tr>
<td>$\lambda_{s2}$</td>
<td>0.94</td>
<td>$\epsilon_{i2}$</td>
<td>0.24</td>
<td>$\gamma_{VOLCOE}$</td>
<td>0.31</td>
<td>2.58</td>
</tr>
<tr>
<td>$\lambda_{s3}$</td>
<td>1.00</td>
<td>$\epsilon_{i3}$</td>
<td>0.07</td>
<td>$\gamma_{VOLYRS}$</td>
<td>-0.05</td>
<td>-0.79</td>
</tr>
<tr>
<td>$\lambda_{s4}$</td>
<td>0.93</td>
<td>$\epsilon_{i4}$</td>
<td>0.24</td>
<td>$\gamma_{VOLUMP}$</td>
<td>0.15</td>
<td>2.37</td>
</tr>
<tr>
<td>$\lambda_{sc1}$</td>
<td>0.89</td>
<td>$\epsilon_{i1}$</td>
<td>0.45</td>
<td>$\gamma_{VOLOPN}$</td>
<td>0.02</td>
<td>0.38</td>
</tr>
<tr>
<td>$\lambda_{sc2}$</td>
<td>0.97</td>
<td>$\epsilon_{i2}$</td>
<td>0.12</td>
<td>$\beta_{VOLREV}$</td>
<td>-0.14</td>
<td>-2.43</td>
</tr>
<tr>
<td>$\lambda_{sc3}$</td>
<td>0.95</td>
<td>$\epsilon_{i3}$</td>
<td>0.08</td>
<td>$\beta_{VOL,ROI}$</td>
<td>0.04</td>
<td>0.70</td>
</tr>
<tr>
<td>$\lambda_{sc4}$</td>
<td>1.00</td>
<td>$\epsilon_{i4}$</td>
<td>0.12</td>
<td>$\gamma_{VOL,RE}$</td>
<td>-0.09</td>
<td>-1.49</td>
</tr>
<tr>
<td>$\lambda_{s1}$</td>
<td>0.86</td>
<td>$\epsilon_{e1}$</td>
<td>0.29</td>
<td>$\gamma_{REV,CMP}$</td>
<td>0.19</td>
<td>3.02</td>
</tr>
<tr>
<td>$\lambda_{s2}$</td>
<td>0.97</td>
<td>$\epsilon_{e2}$</td>
<td>0.21</td>
<td>$\gamma_{ROLCMP}$</td>
<td>-0.00</td>
<td>-0.08</td>
</tr>
<tr>
<td>$\lambda_{s3}$</td>
<td>0.88</td>
<td>$\epsilon_{e3}$</td>
<td>0.17</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Fit Indices

<table>
<thead>
<tr>
<th>Fit Indices</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Square Statistic Value</td>
<td>546</td>
</tr>
<tr>
<td>Chi-Squared Degrees of Freedom</td>
<td>328</td>
</tr>
<tr>
<td>p-Value of Chi-Square Value</td>
<td>.00</td>
</tr>
<tr>
<td>Bentler (1990) Comparative Fit Index</td>
<td>.95</td>
</tr>
<tr>
<td>GFI</td>
<td>.85</td>
</tr>
<tr>
<td>AGFI</td>
<td>.82</td>
</tr>
<tr>
<td>Steiger (1990) RMS Error of Approximation (RMSEA)</td>
<td>.05</td>
</tr>
<tr>
<td>p-value RMSEA &lt; .05</td>
<td>.13</td>
</tr>
</tbody>
</table>

| Squared Multiple Correlation for VOI | .27 |

---

* Maximum likelihood.

b COE = Cost-of-Exit, etc. (see the definitions in Table 1).

* Structural coefficients (e.g., γ's and β's) are standardized.

d See the Table 3 values.

e .90 or better indicates acceptable model-to-data fit (see McClelland and Judd 1993).

f Shown for completeness only-- GFI and AGFI may be inadequate for fit assessment in larger models (see Anderson and Gerbing 1984).

g Values up through .08 indicate acceptable fit (Brown and Cudeck 1993, Jöreskog 1993).
SAT = Satisfaction, etc. (see the definitions in Table 1).

The demographic variables (e.g., REV) have $s=1$ and $s=0$. 
EXECUTIVE SUMMARY

Because voice (attempts to change rather than escape from objectionable relationship conditions) may play an important role in relationship maintenance, the paper investigated antecedents of interfirm voice, including the cost to exit the relationship, overall relationship satisfaction, and firm demographic variables.

After summarizing what is known about interfirm voice, including the confusing empirical results involving voice (e.g., alternative attractiveness typically has had a positive association with voice, rather than negative as theory predicts), the paper proposes that a firm’s voice is affected by their cost to exit (a second-order latent variable, with the latent variable “indicators” alternative attractiveness, relationship investment, and switching cost), plus their overall relationship satisfaction and firm demographic variables (e.g., their revenue and number of employees). These proposals are tested in a field survey of hardware retailer voice involving their primary wholesalers. Using structural equation analysis, the results provide support for the proposed voice associations with satisfaction, cost to exit, and several firm demographic variables. The results suggest a firm’s voice was likely to be increased by their overall relationship satisfaction and cost to exit; newer customers, and subject firms with many competitors, higher revenue, or few employees, were either less likely to be vocal, or associated with reduced voice in the study context. Further, the results suggested that because voice may reduce relationship exit, interfirm relationship managers interested in relationship maintenance may wish to increase partner firm voice by increasing their satisfaction and their cost-of-exit.

The results also suggested that several firm demographic variables might be useful to relationship managers interested in the maintenance of important relationships. Relationship problems are known to the offended firm but not necessarily to the offending firm. In absence of their voice or some other means of identifying them, offended firms are likely to remain unidentified, remediation of their problem(s) is therefore less likely, and the likelihood of their exiting the relationship is increased. Hence relationship managers interested in relationship maintenance may wish to use several firm demographic variables to identify individual firms by name that may be likely to be persistently non-vocal when there are interfirm relationship problems (newer relationships, and partner firms with many competitors, higher revenue, or comparatively few employees were associated with the
reduced voice in the study).
Some Uninvestigated Antecedents of Retailer Exit Intention

Abstract

The article reports a study of the effects on exit intention of retailer revenue and productivity, in a wholesaler-retailer context. The study involved hardware retailers and their primary wholesalers, and some associations were hypothesized to be nonrecursive (bidirectional). The analysis involved structural equations, and the results included that the retailer's intention to exit the relationship with their primary wholesaler was negatively affected by retailer revenue, revenue-per-employee, and the number of competitive stores in the retailer's service area. In addition, the retailer's exit intention was positively affected by return on investment. Finally, the number of competitive stores was positively associated with retailer revenue, and negatively associated with their return on investment. These results and their implications are discussed.

In addition to recognizing the existence of long-term buyer-seller relationships in channel relationships (Arndt 1979, Wind 1970) (see Dwyer, Schurr, and Oh 1987; and Ford 1980), researchers and practitioners have recognized the benefits of these relationships (see Frazier, Spekman, O'Neil 1988; Turnbull and Valla 1986; and Webster 1979). Despite implications that the development and maintenance of long-term relationships is a recent phenomenon, (see Business Week 1987), these relationships have existed for years, especially in retailing: a hardware retailer reported to the authors that they have done business with their primary wholesaler for 76 years.

Yet these relationships are terminated. Except for coverage of the legal aspects of these relationship terminations (see "Legal Developments in Marketing," in the Journal of Marketing), however, there is little empirical knowledge of the termination of these channel relationships.
There has been a trickle of articles lately that addresses channel relationship termination (e.g., Ping and Dwyer 1991, and Ping 1993). These articles reported investigations of response intentions such as intention to exit a channel relationship. They also investigated antecedents of these response intentions such as overall relationship satisfaction, the attractiveness of alternative exchange relationships, the perceived magnitude of relationship-specific investments, and switching costs. While the explanatory power of some of these variables was impressive, the absence of traditional economic variables such as revenue and return on investment is noteworthy.

That these variables are important in the evaluation of a channel relationship is hardly news to practitioners. In fact, some channel texts go to considerable lengths to discuss the use of these variables to evaluate the channel relationship (e.g., Stern and El-Ansary 1988; and Stern, El-Ansary and Brown 1989). However, our knowledge of how well these variables are tied to the actual termination of channel relationships is limited to anecdotal reports.

The purpose of this study is to expand our understanding of channel relationship termination by focusing on several economic antecedents of exit intention. The research fills a gap in the channel reactions-to-dissatisfaction literature, and extends Ping's (1993) findings by providing a broader understanding of the antecedents of exit intention. It also provides empirical support for the economic view of long term buyer-seller relationships proposed in Stern and Reve's (1980) political-economic framework, as a companion to the psycho social view of these relationships (Ping 1993; Dwyer, Schurr and Oh 1987). After briefly summarizing the research on channel relationship termination, the paper proposes that revenue and productivity measures such as return on investment are antecedents of exit intention. The results of a test this proposal using a field
survey of retailers is reported, and managerial implications are discussed.

We begin with a summary of the research related to channel relationship termination.

Background

The marketing channel literature has addressed channel relationship termination in several articles. Dwyer, Schurr and Oh (1987) argued that the process of buyer-seller relationship development consists of awareness, exploration, expansion, commitment, and dissolution phases (see also Ford 1980). In their description of the dissolution phase of the relationship, they offered as a framework for the process of terminating an interfirm relationship, Duck's (1982) process of interpersonal relationship dissolution. Duck argued that individuals progress through four broad stages on the way to personal relationship termination: intrapsychic, dyadic, social, and grave dressing stages.

Ping and Dwyer (1991) subsequently proposed that the committed and dissolution phases of buyer-seller relationship formation consist of stages. They argued that firms progress through seven stages on the way to channel relationship termination: positive or negative affect stages regarding the partner firm; intrapersonal and intracompany stages; then intercompany, public and aftermath stages.

Ping (1993) studied the antecedents of responses to problems in channel relationships, including exit intention. He argued that satisfaction, alternative attractiveness, investments, and switching costs were associated with exit intention. He reported that satisfaction and the unattractiveness of the alternative relationship were negatively associated with exit intention, and that investments and switching costs were not associated with exit intention.
The resulting picture of channel relationship termination is cloudy at best. We talked to firms that were contemplating or had recently completed channel relationship terminations.\(^1\) In these conversations we consistently heard that economic variables such as revenue and revenue-per-employee were important. They were either a deciding or justifying factor in switching to a new supplier, or demoting a major supplier and giving more business to a minor supplier.

We propose that economic variables such as revenue, return on investment, and revenue-per-employee also affect exit intention. The balance of the paper describes a field survey that tests this proposition.

### Hypotheses

In addition to latent variables such as satisfaction, economic variables such as revenue should be associated with exit intention in a channel relationship. Ping (1993) argued that increases in a firm's overall satisfaction should make economic exchanges with its partner firm perceptually more valuable. The firm's revenue should have a similar effect on the relationship with its exchange partner. As satisfaction and revenue increase, the firm should be disinclined to exit a relationship from which these are derived, because there is much to lose. Thus,

\(\text{H}_1: \text{Satisfaction and revenue are negatively associated with exit intention.}\)

---

\(^1\) The six companies interviewed represented a convenient sample in a geographically localized area. They had estimated gross revenues of three million to eighty million dollars, and represented distributors and retailers in diverse markets such as tires, hardware, and electrical supplies. We contacted at least one key informant in each company who was responsible for one or more "up-channel" or "down-channel" relationships, and was directly involved in the target relationship termination. These informants had various titles including president, owner, and general manager.
Previous studies lend some support to these assertions. Ping (1993) observed that satisfaction was negatively associated with exit intention. In romantic relationships, Rusbult, Zembrod and Gunn (1982) reported that prior satisfaction was negatively associated with exiting. Rusbult, Farrell, Rogers, and Mainous (1988) reported similar findings in the employment relations literature.

However, the interviews mentioned earlier suggested that revenue was affected by the decision to exit the current exchange relationship. The firms generally reported that their intention to exit an existing relationship and secure or increase business with an alternative was accompanied by or resulted in improved revenue. It seems plausible that as firms become more concerned about their relationship with a major exchange partner they become more concerned about their business. The interview informants reported activities aimed at increasing revenue ranging from increased promotion to adding new merchandise lines. Hence,

H2: Exit intention positively affects revenue.

In the interviews we also noticed that better managed firms seemed to be over represented. Many of these firms focused on efficiency in their business, and appeared to be very aware of productivity measures such as revenue-per-employee and return on investment. For this reason, we propose that productivity is negatively associated with exit intention, and that less productive firms should be more inclined to exit an exchange relationship when there are problems. In particular, productivity measures such as return on investment and revenue-per-employee should be negatively associated with exit intention. Formally,

H3: Return on investment negatively affects exit intention,

and

H4: Revenue-per-employee is negatively associated with exit intention.
However, exit intention should in turn be associated with return on investment. Intending to change exchange partners should increase the subject firm's investments in non-revenue producing areas of the business, and reduce return on investment. The interview informants reported non-revenue producing activities ranging from attending trade shows to meet prospective wholesalers, to hiring a marketing research firm to do competitive research. Specifically, exit intention should increase the firm's search, evaluation and negotiating costs, and return on investment should decrease as a result. Hence,

H5: Exit intention negatively affects return on investment.

In retailing, the number of competitors in a retailer's market area is plausibly related to the retailer's revenues and return on investment. In mature retailing categories, as the number of competitors increases in the subject retailer's service area, an established firm's revenue and return on investment should decrease. It could be argued that competition weeds out the poor performers, and in effect only the strong survive. Thus, for established retailers

H6: The number of competitors negatively affects retailer revenue and return on investment.

How long the retailing firm has been in business, and the number of years the firm has done business with their primary wholesaler should also affect exit intention. Retailers that have been in business for many years should be more knowledgeable of the alternative wholesalers (Ping 1993), and experienced in dealing with their wholesaler (Dwyer, Schurr and Oh 1987). Because these may be sources of countervailing power (Dwyer 1980), these retailers should be less dependent on the wholesaler (Emerson 1962). This in turn should make them more willing to change wholesalers. Hence,

\footnote{A reviewer suggested that established retailers may have more}
H7: The number of years the retailer has been in business is positively associated with their exit intention.

On the other hand, the length of time the retailer and the wholesaler have done business together should make future business together likely. In long-lived exchange relationships, relationship specific investments have increased, commitment has grown, and there is a pressure to adjust rather than dissolve an exchange relationship (Dwyer, Schurr and Oh 1987). Thus,

H8: The number of years the retailer has done business with their primary wholesaler is negatively associated with exit intention.

The balance of this article presents the results of a test of these hypotheses.

Method

We conducted a field survey of hardware retailers concerning their relationship with their primary wholesaler: their top full line wholesaler. The results were used to estimate the Figure 1 structural equation model using EQS.

Measures

The measurement of the study variables used a combination of balanced five point Likert items, forced choice, and open-ended scales. For example satisfaction, the firm's global evaluation of relationship fulfillment (Dwyer and Oh, 1987), was measured using a modification of the Dwyer and Oh satisfaction scale inspired by Gaski and Nevin (1985). The domain of channel member satisfaction includes all the characteristics of the exchange relationship that the firm deems "rewarding, profitable, or instrumental" (Rukert and Churchill, 1984), or costly, unfair or frustrating (Ping 1993). The items in the satisfaction power in dealing with wholesalers compared to relatively new retailers.
measure assessed the retailer's overall satisfaction with the wholesaler, fairness in the exchange relationship, and the degree to which the wholesaler was a good company with which to do business (see Table 1).

Exit intention, the intention to physically leave the exchange relationship, was operationalized as the propensity to terminate the primary wholesaler relationship (Ping 1993). This conceptualization taps the degree of inclination to discontinue the relationship with the primary wholesaler. The items in the exit intention measure concerned thinking of exiting the relationship, looking for a replacement primary wholesaler, considering a replacement primary wholesaler, and resolving to end the relationship with the primary wholesaler.

The economic variables, the retailer's annual revenue, the number of years the retailer has done business with the primary wholesaler, the number of years the retailer has been in business, the number of competitive stores in the retailer's service area, and a variable used to compute the retailer's revenue-per-employee, the retailer's number of employees, were measured using open-ended questions. These measures asked for last year's revenue, the number of years the retailer has done business with the primary wholesaler, the number of years the retailer has been in business, the number of competitive stores in the retailer's service area, and the retailer's number of employees. Revenue-per-employee was computed by dividing the retailer's revenue by the number of employees, and return on investment was measured using a forced choice scale (see Table 1).

Sample

The study sampled hardware retailers. The key informant within these sampling units was the store operator or executive. We randomly drew samples of these informants from the subscription list for a
hardware retailing industry publication that appeared to be representative of U.S. hardware retailers in all 50 states.

The survey questionnaire was mailed to 100 pretest retailers and 600 final test retailers, and a follow-up post card mailing in the final test produced one hundred eighty-five usable responses.

An analysis of the postmarks and demographics of the responding retailers suggested that the set of responses was generally representative of the population of U.S. hardware retailers. Table 2 shows the sample profile.

Results

Reliability

The pretest responses were used to assess the psychometric properties of the satisfaction and exit intention measures. The measures appeared to be unidimensional, internally and externally consistent (see Gerbing and Anderson, 1984), and had coefficient alpha's of .8 or above. The psychometric properties of the measures were reexamined using the final test responses and item-to-total correlations, coefficient alpha calculations, ordered similarity coefficients (Hunter, 1973), multiple group analysis (Anderson, Gerbing and Hunter, 1987), and single factor analysis (Jöreskog, 1993, pp. 297, 313). The measures were unidimensional, and internally and externally consistent. In addition, they had latent variable reliabilities of .95, and an average variance extracted of .76 or above (Fornell and Larker, 1981) (see Table 3).

Validity

The satisfaction and exit intention measures appeared to be content valid, and the Table 4 intercorrelations of the study variables were below .65, which suggests discriminant validity.

They also appeared to be construct valid. The study variables were significantly and plausibly correlated with at least one other study
variable (see Table 4), except return on investment (ROI), which was not correlated with any study variable. In particular, satisfaction was negatively correlated with exit intention as hypothesized. The number of years the retailer had done business with the wholesaler was positively correlated with the number of years the retailer had been open. The number of years the retailer had been open was positively correlated with the number of competitive stores, and revenue was positively correlated with revenue-per-employee. However, revenue was positively correlated with the number of competitive stores rather than negative as hypothesized.

The lack of at least the hypothesized correlation between ROI and exit intention was due to the non-recursive relationship between these two variables in the sample. In addition, the unexpected correlation between revenue and the number of competitive stores is explainable, and will be discussed later.

Structural Model Estimation

The Figure 1 relationships between exit intention, and revenue and return on investment were unbiased (see the Appendix for a discussion of the potential for biased coefficient estimates in nonrecursive associations). In addition, the Figure 1 nonrecursive structural equation model was identified (see the Appendix for an identification proof).

The measurement and structural models corresponding to Figure 1 appeared to fit the data, based on the Comparative Fit Index (Bentler 1990) and the Adjusted Goodness of Fit Index (see Tables 4 and 5).³

³ A path between revenue-per-employee and exit intention was added to Figure 1 to obtain admissible structural coefficient estimates between exit intention and revenue. Little is known about the sensitivity of non recursive latent variable models to structural model misspecification, but in the present analysis the non recursive coefficient estimates were biased by omitting a path that was significant in the measurement model.
Table 5 shows maximum likelihood structural parameter estimates, and maximum likelihood-"Robust" standard error and chi-squared estimates,\(^4\) along with two stage least squares structural parameter estimates for reference.\(^5\)

Hypotheses Tests

The hypothesized associations received mixed support (see Table 5). Revenue and ROI affected exit intention, as hypothesized, and exit intention was associated with the satisfaction, also as hypothesized. In addition, revenue was associated with the number of competitive stores, as hypothesized, but ROI was positively associated with the number of competitive stores. Revenue-per-employee was negatively associated with exit intention indirectly via a significant path connecting it and revenue. Among the associations not observed were the H2 and H5 revenue- and ROI-to-exit intention associations. In addition, the H7 and H8 associations with exit intention for years in business, and years with the wholesaler were not significant.

Discussion

\(^4\) While maximum likelihood estimates of measurement and structural parameters are robust to departures from normality in the data (Anderson and Amemiya 1985, 1986; Boomsma 1983; Browne 1987; Harlow 1985; Sharma, Durvasula and Dillon 1989; Tanaka 1984), maximum likelihood standard errors and chi-squared statistics are believed to be sensitive to departures from normality (see Bollen 1990 p. 406; Jöreskog and Sörbom 1989). Because, as is frequently the case, the study variables were not particularly normally distributed, Table 4 shows maximum likelihood "Robust" estimates of the standard error and chi-squared statistic (Satorra and Bentler 1988; see Bentler 1989, p.217 et seq.; and Hu, Bentler and Kano 1992). This Robust chi-squared estimate was also used to calculate the Comparative Fit Index shown in Table 4.

\(^5\) The Table 5 regression estimates were produced using summed indicators for satisfaction and exit intention, and two stage least squares (see Goldberger 1964 or Berry 1984 for details). The two stage least squares coefficient estimates were then used to verify the reasonableness of the EQS coefficient estimates.
In summary, the study found five associations with exit intention. Revenue had a negative effect on exit intention, as hypothesized. However, ROI had a positive effect on exit intention, rather than the hypothesized negative effect. Revenue-per-employee was negatively associated with exit intention through a path involving a significant association between revenue-per-employee and revenue, and the significant association between revenue and exit intention. Similarly, the number of competitive stores had a surprising negative association with exit intention. However, the number of years the retailers did business with their wholesalers, and the years the retailers were in business were not related to their exit intention. Finally, retailer satisfaction was negatively associated with their exit intention, as hypothesized. This last result is consistent with prior channel research (Ping 1993).

The positive association between exit intention and ROI was interesting. Based on the interviews, we expected ROI to be negatively associated with exit intention. However, the study results suggest that higher ROI retailers also had higher exit intentions. One explanation for this positive association would be that higher ROI retailers are somehow less dependent on their primary wholesaler. This should make such retailers more inclined to exit their primary wholesaler relationship when there are relationship problems. These retailers might invest little in relationship specific assets (Williamson 1975) to attain high ROI, and this in turn could make them more able to switch primary wholesalers. These retailers could be located in less competitive markets (the correlation between ROI and number of competitors was negative) where their own efforts to stimulate selective demand may be sufficient, and the primary wholesaler is nothing more than a source of goods. While it is risky to generalize from a single study, this suggests that wholesalers may want to devote
extra attention to these retailers when there are relationship problems, because these retailers were more inclined to exit in this study.

Turning to the indirect effect between revenue-per-employee and exit intention, the non-significant direct effect between these two variables was unexpected. We anticipated that productivity of any type would be positively associated with exit intention. While ROI, a type of productivity, was positively associated with exit intention, the direct effect of revenue-per-employee on exit intention was non-significant. However, the indirect effect on exit intention of revenue-per-employee, through the path from revenue-per-employee to revenue, was negative and significant, because each of these paths was significant.\(^6\) This suggests that as revenue-per-employee increases, exit intention declines, and the high revenue-per-employee retailers in this study had lower exit intentions toward their wholesaler. In addition, revenue-per-employee was uncorrelated with ROI (see Table 4). This suggests that high ROI and high revenue-per-employee were different productivity strategies in this context, and the two strategies may have been independently pursued.

The significant associations between competitive stores and revenue, and between competitive stores and ROI were also interesting. We anticipated that increased competition would depress retailer revenues and ROI. In this study, the number of competitive stores was associated with decreased ROI and increased retailer revenues. One explanation for the latter association would be that more competitive stores may have increased the level of promotion in the local market.

\(^6\) The indirect effect on exit intention of revenue-per-employee through revenue is determined by the coefficients on the path from revenue-per-employee to exit intention (see Bollen 1990). The effect is the product of the path coefficients for the path connecting revenue-per-employee, revenue, and exit intention \((.61 \times (-.25) = -.15)\).
This in turn may have increased primary demand in that market. If this were the case, increased promotion could have lead to increased revenue for all the retailers. However, it could also have been the case that in markets with many competitors, only the larger hardware retailers survived.

Combining the two paths between the number of competitive stores and exit intention (the competitive stores-revenue-exit intention path and the competitive stores-ROI-exit intention path) produced an indirect negative effect on exit intention. This indirect effect of the number of competitive stores on exit intention was significant, because each component of these paths was significant. This suggests that the association between the number of competitive stores and exit intention was negative, and as the number of competitive stores increased, exit intention declined. One explanation for this result could be that competitive markets in this context were populated by established retailers (years in business was positively correlated with competitive stores). This, plus the attractiveness of the market to the wholesaler, could have made it more likely that problems between the retailer and the wholesaler would be resolved to the retailer's satisfaction.

Turning to the negative association between the number of competitive stores and ROI, as the number of competitive stores increased, retailer financial efficiency in terms of ROI declined. Because revenue also increased with the number of competitive stores, this suggests that competition decreased at least one type of efficiency, contrary to

---

7 The indirect effect on exit intention of competitive stores through revenue and ROI is determined by the combination of the paths from competitive stores to exit intention. The effect is the path coefficient for the path connecting competitive stores, revenue, and exit intention, plus the path coefficient for the path connecting competitive stores, ROI, and exit intention (=.29*[-.25] +[-.13]*.35 = -.11).
economic theory. However, in this context customer proximity to the smaller retailers, customer price insensitivity for smaller and emergency purchases, and retailers willing to accept lower ROI's may have combined to reduce opportunity costs for "convenience minded" consumers, and thereby increased another type of efficiency. This suggests smaller hardware stores may attract purchases related to small repairs and projects, emergency repairs, and special orders. The larger stores such as HQ and Builders Square may attract purchases for major projects and shopping goods such as lawn mowers and wooden decks. The smaller stores may in effect be operating as hardware "convenience stores."

Both the length of time the retailer had been in business and the length of time the retailer and the wholesaler had done business with each other were unrelated to exit intention. We expected newer retailers and longer term wholesaler relationships to be negatively associated with exit intention. These results suggest that retailer experience was no predictor of exit intention, and a long-lived wholesaler relationship may or may not protect the relationship when there are relationship problems. While these results may be due to the correlations between the years variables and other exogenous variables such as the number of competitive stores, we suspect there may be many attractive primary wholesalers in this context. Experienced and novice hardware retailers may be equally aware of them. This in turn may mean that exit and therefore exit intention is perceived as possible: there are attractive alternatives (Ping 1993). For wholesalers, this may mean that retailer inexperience and relationship longevity cannot be assumed to work in the wholesaler's favor when there are relationship problems - they had little to do with retailer exit intention in this study.

Turning to the lack of exit intention effects on revenue and ROI, these results suggest that for retailers that intended to exit, doing
so was not generally related to their revenue and ROI. In other words, the activities, mental and physical, which attended exit intention did not necessarily reduce retailer revenues or make their business less efficient. For a retailer bent on exiting a wholesaler relationship, this suggests long term gains from exiting may not necessarily come at a cost to the retailer's revenue and ROI in the short term.

Several significant measurement model correlations were also interesting. The large positive correlation between the length of time the retailer had been in business and the length of time the retailer and the wholesaler had done business with each other ($\phi = .46$) suggests that in this context the retailers did not switch wholesalers often.

The positive correlation between the length of time the retailer had been in business and the number of competitive stores in the retailer's service area ($\phi = .15$) suggests that the experienced retailer was slightly more likely to be found in the more competitive markets.

Finally, the positive correlation between revenue-per-employee and revenue ($\phi = .61$) suggests that the larger retailers were more productive in terms of labor productivity in this context. Curiously the correlation between revenue and ROI was not significant, suggesting that these larger retailers did not necessarily enjoy higher ROI's.

A comment on the estimation techniques used in the study may be of interest. The two stage least squares regression estimates for Figure 1 were similar in direction and size to the structural equation estimates (see Table 5). However, the significance estimates for the nonrecursive effects were attenuated, and as a result, two stage least squares estimation missed the significant revenue-exit intention and ROI-exit intention effects (see Table 5). This suggests that while coefficient estimates from regression involving reliable latent variables such as satisfaction and exit intention are generally trustworthy (see Aiken
and West 1991), significance estimates for non recursive effects may not be. For this reason, structural equation analysis may be preferred to two stage least squares in estimating non recursive effects for latent variables.

Much work remains to be done in this area. The study was designed to investigate plausible economic antecedents of exit intention, and it was limited by the lack of inclusion of other known antecedents such as alternative attractiveness, investments, or switching costs (Ping 1993). Because of exogenous variable intercorrelations, it is possible that a model of exit intention that includes these known or other unknown antecedent variables would produce non significant effects for one or more of the significant effects observed in the present study.

In addition, exit intention may or may not be related to actual exiting behavior. Ping's (1993) results suggest that there is at least one alternative to exit intention, neglect. Ping (1993) characterizes neglect as emotional, rather than physical withdrawal from the exchange relationship. Because neglect was strongly positively correlated with exit intention (.70) in that study, it is possible that some of the present study retailers could neglect their wholesaler relationship rather than physically exit it.

Future research should attempt to determine the antecedents of actually exiting an exchange relationship. Because exit intention certainly precedes actual exiting, determining the antecedents of exit intention is an important first step. However, the existence of a neglect option observed by Ping (1993) suggests that not all who intend to exit may actually do so. Ping found no association between exit intention and relationship investments or switching costs. Perhaps these variables affect actual exiting rather than exit intention.

Summary
These significant exit intention associations suggest there may be additional factors that bear on exit intention beyond those observed in Ping (1993). While the negative satisfaction-exit intention association was observed by Ping (1993) and the present study, the present results suggest that increased retailer exit intention was also associated with higher retailer ROI, and reduced retailer revenues, revenue-per-employee, and number of competitive stores. Retailers in this study with higher ROI, and lower revenue, satisfaction, competitive stores, and revenue-per-employee had higher exit intentions regarding their primary wholesaler relationship. These results suggest that a wholesaler's efforts to maintain retailer satisfaction, revenue, and revenue-per-employee may help attenuate retailer exit intention. In addition, higher ROI retailers, and retailers with few competitive stores in their service area may merit special attention from wholesalers when there are relationship problems: for these retailers in the study, as their ROI increased, or the number of competitive stores in their service area was lower, their exit intention increased.

The exit intention associations with revenue, ROI, revenue-per-employee, and competitive stores had coefficients of -.25, .35, -.15, and -.11, respectively. However, the associations between satisfaction and exit intention were larger—-.62 or more (see Table 4). This suggests that satisfaction was the most important antecedent of exit intention in this study. Revenue, ROI, revenue-per-employee, and competitive stores were about half or less as influential on exit intention by comparison. For wholesalers, this in turn suggests retailer satisfaction with the wholesaler is an important antecedent of exit intention, and, while not unimportant, retailer revenue, ROI, revenue-per-employee, and competitive stores may be relatively less important.
REFERENCES


Table 1
SCALE ITEMS

SATisfaction: (Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree)
1. All in all, my primary wholesaler is very fair with me.
2. Overall, my primary wholesaler is a good company to do business with.
3. In general I am pretty satisfied with my relationship with my primary wholesaler.
4. Overall, my primary wholesaler treats me very fairly.
5. All in all, my relationship with my primary wholesaler is very satisfactory.

EXIT intention: (Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree)
1. Occasionally I will think about ending the business relationship with my primary wholesaler.
2. I am looking for a replacement wholesaler.
3. I am not likely to continue the business relationship with my primary wholesaler.
4. I will probably consider a replacement primary wholesaler in the near future.
5. I am looking at replacement wholesalers.
6. I will probably stop doing business with my primary wholesaler in the near future.

YRS with the current primary wholesaler:
How many years have you done business with your primary wholesaler? ________

Number of years business has been OPEN:
How many years has your store been open? ________

Number of employees:
The number of employees at your store? _____

REVenue:
Your last year's sales? _____

Number of COMPetitors:
The number of competitive stores in your service area? _____

Return On Investment:
Last year's return on investment was (circle one):
a. negative
b. 0-4 percent
c. 5-9 percent
d. 10-14 percent
e. 15-19 percent
f. 20-24 percent
g. 25-29 percent
h. 30-34 percent
i. 35-49 percent
j. 50 percent or more

Revenue/EMP = REV/(Number of Employees)
Table 2
PROFILE OF THE SAMPLE

<table>
<thead>
<tr>
<th>First Title Mentioned</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner, partner</td>
<td>98</td>
</tr>
<tr>
<td>President</td>
<td>57</td>
</tr>
<tr>
<td>General Manager</td>
<td>5</td>
</tr>
<tr>
<td>Chief Financial Officer</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>15</td>
</tr>
<tr>
<td>Not reported</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>185</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reported Last Year's Sales</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;$10MM</td>
<td>4</td>
</tr>
<tr>
<td>$3-9.99MM</td>
<td>7</td>
</tr>
<tr>
<td>$1.2-2.99MM</td>
<td>24</td>
</tr>
<tr>
<td>$0.6-1.199MM</td>
<td>28</td>
</tr>
<tr>
<td>$0.25-0.599MM</td>
<td>35</td>
</tr>
<tr>
<td>$0.1-0.299MM</td>
<td>33</td>
</tr>
<tr>
<td>$.01-.099MM</td>
<td>20</td>
</tr>
<tr>
<td>$&lt;.01MM</td>
<td>0</td>
</tr>
<tr>
<td>Unreported</td>
<td>34</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>185</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years With Primary Wholesaler</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>14</td>
</tr>
<tr>
<td>3-5</td>
<td>44</td>
</tr>
<tr>
<td>6-10</td>
<td>42</td>
</tr>
<tr>
<td>11-20</td>
<td>50</td>
</tr>
<tr>
<td>21-30</td>
<td>17</td>
</tr>
<tr>
<td>31+</td>
<td>17</td>
</tr>
<tr>
<td>Unreported</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>185</strong></td>
</tr>
<tr>
<td>Construct</td>
<td>Parameter</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>Items</td>
</tr>
<tr>
<td></td>
<td>df</td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
</tr>
<tr>
<td></td>
<td>GFI</td>
</tr>
<tr>
<td></td>
<td>AGFI</td>
</tr>
<tr>
<td></td>
<td>RMS Residual</td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
</tr>
<tr>
<td>Exit Intention</td>
<td>Items</td>
</tr>
<tr>
<td></td>
<td>df</td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
</tr>
<tr>
<td></td>
<td>GFI</td>
</tr>
<tr>
<td></td>
<td>AGFI</td>
</tr>
<tr>
<td></td>
<td>RMS Residual</td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
</tr>
</tbody>
</table>

^a Items = Number of items in the scale.
df = LISREL Chi-squared statistic degrees of freedom.
Chi-Squared = LISREL Chi-squared statistic value.
p-value = Attained significance of the LISREL chi-squared statistic.
GFI = LISREL goodness of fit index.
AGFI = LISREL adjusted goodness of fit index.
RMS Residual = LISREL root mean squared residual.
Alpha = Coefficient (Cronbach) alpha value.
### Table 4
**MEASUREMENT MODEL RESULTS**

#### Latent Variable Covariances\(^a\) (φ's):

<table>
<thead>
<tr>
<th></th>
<th>SAT</th>
<th>EXIT</th>
<th>YRS</th>
<th>OPEN</th>
<th>REV</th>
<th>COMPET</th>
<th>ROI</th>
<th>R/EMP</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAT</td>
<td>.59</td>
<td>- .63*</td>
<td>.14</td>
<td>.14</td>
<td>.02</td>
<td>.09</td>
<td>.03</td>
<td>-.05</td>
</tr>
<tr>
<td>EXIT</td>
<td>-.48</td>
<td>.95</td>
<td>-.14</td>
<td>-.06</td>
<td>-.05</td>
<td>-.13</td>
<td>-.08</td>
<td>.01</td>
</tr>
<tr>
<td>YRS</td>
<td>1.55</td>
<td>-1.99</td>
<td>185.81</td>
<td>.46*</td>
<td>.07</td>
<td>.06</td>
<td>.05</td>
<td>.11</td>
</tr>
<tr>
<td>OPEN</td>
<td>3.02</td>
<td>-1.86</td>
<td>175.67</td>
<td>757.19</td>
<td>.09</td>
<td>.15*</td>
<td>.02</td>
<td>.05</td>
</tr>
<tr>
<td>REV</td>
<td>.33</td>
<td>-.90</td>
<td>18.89</td>
<td>45.03</td>
<td>301.63</td>
<td>.30*</td>
<td>-.07</td>
<td>.61*</td>
</tr>
<tr>
<td>COMPET</td>
<td>.87</td>
<td>-1.50</td>
<td>9.86</td>
<td>48.70</td>
<td>60.98</td>
<td>134.68</td>
<td>-.10</td>
<td>-.00</td>
</tr>
<tr>
<td>ROI</td>
<td>.05</td>
<td>-.17</td>
<td>1.48</td>
<td>1.26</td>
<td>-2.66</td>
<td>-2.61</td>
<td>4.46</td>
<td>.05</td>
</tr>
<tr>
<td>R/EMP</td>
<td>-.17</td>
<td>.05</td>
<td>6.27</td>
<td>5.54</td>
<td>41.36</td>
<td>-1.12</td>
<td>.44</td>
<td>15.14</td>
</tr>
</tbody>
</table>

#### Parameter Estimates:

\[
\begin{align*}
\lambda_{s1} & = .86 & \theta_{es1} & = .17 & \lambda_{e1} & = .85 & \theta_{re1} & = .54 \\
\lambda_{s2} & = .91 & \theta_{es2} & = .11 & \lambda_{e2} & = .91 & \theta_{re2} & = .15 \\
\lambda_{s3} & = .96 & \theta_{es3} & = .13 & \lambda_{e3} & = .83 & \theta_{re3} & = .22 \\
\lambda_{s4} & = .95 & \theta_{es4} & = .12 & \lambda_{e4} & = 1.00 & \theta_{re4} & = .09 \\
\lambda_{s5} & = 1.00 & \theta_{es5} & = .08 & \lambda_{e5} & = .96 & \theta_{re5} & = .23 \\
\lambda_{e6} & & \theta_{re6} & = .88 & & & \theta_{re6} & = .19
\end{align*}
\]

#### Fit Indices:

- Chi-Squared Degrees of Freedom = 97
- Chi-Squared Statistic Value = 91.98
- p-Value of Chi-Squared Value = .625
- Goodness of Fit Index (GFI) = .96
- Adjusted Goodness of Fit Index (AGFI) = .94
- RMS Residual = .127
- Comparative Fit Index (CFI) Bentler (1990) = 1.00

#### Average Variance Extracted:

<table>
<thead>
<tr>
<th>Variables</th>
<th>SAT</th>
<th>EXI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Variance Extracted</td>
<td>.80</td>
<td>.76</td>
</tr>
</tbody>
</table>

#### Latent Variable Reliabilities:

<table>
<thead>
<tr>
<th>Variables</th>
<th>SAT</th>
<th>EXI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latent Variable Reliabilities</td>
<td>.95</td>
<td>.95</td>
</tr>
</tbody>
</table>

\(^a\) t-value greater than 2.

\(^a\) Covariances on and below the diagonal, correlations above.
### Table 5
### ESTIMATION RESULTS

#### Structural Equation Analysis Estimates:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>t-value</th>
<th>Parameter</th>
<th>Estimate</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\lambda'$s</td>
<td>$\beta$</td>
<td></td>
<td>$\lambda'$s</td>
<td>$\beta$</td>
<td></td>
</tr>
<tr>
<td>$\sigma$'s</td>
<td>$\beta$</td>
<td></td>
<td>$\sigma$'s</td>
<td>$\beta$</td>
<td></td>
</tr>
<tr>
<td>$\phi$'s</td>
<td>$\beta$</td>
<td></td>
<td>$\phi$'s</td>
<td>$\beta$</td>
<td></td>
</tr>
<tr>
<td>$\xi_{EXI}$</td>
<td>.59</td>
<td></td>
<td>$\xi_{EXI}$</td>
<td>.71</td>
<td></td>
</tr>
<tr>
<td>$\xi_{REV}$</td>
<td>160.75</td>
<td></td>
<td>$\xi_{ROI}$</td>
<td>4.37</td>
<td></td>
</tr>
<tr>
<td>$\psi_{EXI,REV}$</td>
<td>2.67</td>
<td></td>
<td>$\psi_{EXI,ROI}$</td>
<td>2.67</td>
<td></td>
</tr>
<tr>
<td>$\psi_{EXI,YRS}$</td>
<td>-.62</td>
<td>-6.05</td>
<td>$\psi_{EXI,SAT}$</td>
<td>-.65</td>
<td>-6.05</td>
</tr>
<tr>
<td>$\psi_{EXI,OPEN}$</td>
<td>.06</td>
<td>1.18</td>
<td>$\psi_{EXI,R/EMP}$</td>
<td>-.01</td>
<td>-.51</td>
</tr>
<tr>
<td>$\psi_{EXI,COMPET}$</td>
<td>-.25</td>
<td>-2.28</td>
<td>$\psi_{EXIT,GEO}$</td>
<td>.35</td>
<td>4.76</td>
</tr>
<tr>
<td>$\gamma_{EXI,YRS}$</td>
<td>-.10</td>
<td>.13</td>
<td>$\gamma_{EXI,YRS}$</td>
<td>-.12</td>
<td>.20</td>
</tr>
<tr>
<td>$\gamma_{EXI,OPEN}$</td>
<td>.06</td>
<td>.23</td>
<td>$\gamma_{EXI,OPEN}$</td>
<td>.05</td>
<td>.53</td>
</tr>
<tr>
<td>$\gamma_{EXI,R/EMP}$</td>
<td>.14</td>
<td>.31</td>
<td>$\gamma_{EXI,R/EMP}$</td>
<td>-.04</td>
<td>.61</td>
</tr>
<tr>
<td>$\gamma_{EXI,COMPET}$</td>
<td>-.04</td>
<td>.63</td>
<td>$\gamma_{EXI,COMPET}$</td>
<td>-.13</td>
<td>2.15</td>
</tr>
<tr>
<td>$\gamma_{EXI,ROI}$</td>
<td>.61</td>
<td>3.38</td>
<td>$\gamma_{EXI,ROI}$</td>
<td>.35</td>
<td>4.76</td>
</tr>
</tbody>
</table>

#### Fit Statistics:

- Chi-Squared: 83
- Degrees of Freedom: 90
- Chi-Squared p-Value: .733
- RMS Residual: .238
- GFI: .94
- AGFI: .91
- CFI: 1.00
- EXI Squared Mult. Corr.: .38
- REV Squared Mult. Corr.: .46

#### Two Stage Least Squares Regression:

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>$\beta$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXIT</td>
<td>SAT</td>
<td>-.59</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>YRS</td>
<td>-.10</td>
<td>.13</td>
</tr>
<tr>
<td></td>
<td>OPEN</td>
<td>.07</td>
<td>.31</td>
</tr>
<tr>
<td></td>
<td>R/EMP</td>
<td>.14</td>
<td>.31</td>
</tr>
<tr>
<td></td>
<td>REVENUE</td>
<td>-.14</td>
<td>.23</td>
</tr>
<tr>
<td></td>
<td>EXIT</td>
<td>-.04</td>
<td>.63</td>
</tr>
<tr>
<td></td>
<td>COMPET</td>
<td>.29</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>R/EMP</td>
<td>.61</td>
<td>.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>$\beta$</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXIT</td>
<td>SAT</td>
<td>-.62</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>YRS</td>
<td>-.12</td>
<td>.20</td>
</tr>
<tr>
<td></td>
<td>OPEN</td>
<td>.05</td>
<td>.53</td>
</tr>
<tr>
<td></td>
<td>R/EMP</td>
<td>-.04</td>
<td>.61</td>
</tr>
<tr>
<td></td>
<td>ROI</td>
<td>.65</td>
<td>.35</td>
</tr>
<tr>
<td></td>
<td>EXIT</td>
<td>-.06</td>
<td>.59</td>
</tr>
<tr>
<td></td>
<td>COMPET</td>
<td>-.11</td>
<td>.12</td>
</tr>
<tr>
<td></td>
<td>R/EMP</td>
<td>.61</td>
<td>.00</td>
</tr>
</tbody>
</table>

---


b See Table 4
Figure 1
MODEL OF THE PROPOSED RELATIONSHIPS

\[ e_{s1} \quad e_{s2} \quad e_{s3} \quad e_{s4} \quad e_{s5} \]

\[ S_1 \quad S_2 \quad S_3 \quad S_4 \quad S_5 \]

SATISFACTION

\[ e_{e1} \quad e_{e2} \quad e_{e3} \quad e_{e4} \quad e_{e5} \quad e_{e6} \]

\[ e_1 \quad e_2 \quad e_3 \quad e_4 \quad e_5 \quad e_6 \]

YRS WITH WHOLESALER EXIT \( \zeta \)

\[ y_w \quad 0 \]

REVENUE/EMPL

\[ p \quad 0 \]

COMPETITORS

\[ c \quad 0 \]

REVENUE

\[ s \]

ROI

\[ r \]

COMPETITORS

\[ 0 \]
Appendix

The next section summarizes the use of the control variables to obtain unbiased and identified estimates for the Figure 1 structural equation models. The subsequent section presents the identification proofs for Figure 1.

Nonrecursive Bias

In structural equation modeling it is assumed that the exogenous variables and the structural disturbance terms are uncorrelated. Violations of this assumption produce biased structural coefficient estimates (Goldberger 1964, see Berry 1984). Recursive models are easily specified to accommodate this assumption. However in nonrecursive models this assumption requires some specification effort. For example, in the upper Figure 1 structural equation model, specifying the relationship between EXIT and REVENUE as shown in Figure A violates the uncorrelatedness assumption: $\zeta_E$ is correlated with REVENUE through the EXIT-to-REVENUE association, and $\zeta_R$ is correlated with EXIT through the REVENUE-to-EXIT association. For this reason antecedents of EXIT, REVENUE, and ROI were added as control variables to the Figure 1 structural equation model to change the status of EXIT, REVENUE, and ROI to that of endogenous variables.

Figure A

```
EXIT ← $\zeta_E$
```

```
REVENUE ← $\zeta_R$
```

These antecedents should be of theoretical interest and they should be specified so they are not associated with both EXIT and REVENUE, for example. If these antecedent control variables are specified with paths to both EXIT and REVENUE, the resulting structural equation model may be underidentified. Underidentified structural models do not produce unique parameter estimates (see Berry 1984).

However, if these control variables are specified with no path to a variable with which they are associated, the structural equation model may not fit the data. For these reasons we chose control variables of theoretical interest that would not be associated with both target variables. Relationship satisfaction, how long the retailer has been in business (open), and the number of years the retailer has done business with their primary wholesaler should not be associated with revenue or ROI. The subject retailer’s revenue-per-employee should also not be associated with ROI, but it should be positively
correlated with revenue. Similarly the number of competitors should not be associated with EXIT.

Identification Proof

Turning to the identification of the Figure 1 structural equation models, the identification of the measurement and structural parameters is established by showing that these parameters are uniquely determined by the elements of the observed variables' covariance matrix. Bollen (1990) suggested a sufficient two step procedure to establish the identification of a structural equation model. In step 1, the identification of the measurement model is established, and in step 2 the identification of the structural model is demonstrated.

For the step 1 measurement model, the loading and error parameters of the single indicator latent variables are fixed at 1 and zero respectively. The variance of a single indicator latent variable X is therefore determined by the variance of the observed single indicator x. In symbols,

\[ V(x) = V(\lambda_xX + \varepsilon_x) = V(1X + 0) = \phi_{xx} \]

where \( V(x) \) is the variance of the observed variable x; \( \lambda_x \) and \( \varepsilon_x \) are the loading and error of x; and \( \phi_{xx} \) is the variance of the latent variable X. As a result the single indicator latent variable loadings, errors, and variances are identified.

The loadings, errors, and variances for SAT and EXI are determined similarly. For the indicators \( s_1 \) and \( s_2 \) of SAT, the covariance of \( s_1 \) and \( s_2 \) is given by

\[ \sigma_{12} = C(s_1, s_2) = C(\lambda_{s1}SAT + \varepsilon_{s1}, \lambda_{s2}SAT + \varepsilon_{s2}) = \lambda_{s1}\lambda_{s2}V(SAT) \]

where \( \sigma_{12} \) is the covariance of \( s_1 \) and \( s_2 \), \( C(a,b) \) is the covariance of a and b, \( \lambda_{s1}, \lambda_{s2}, \varepsilon_{s1}, \) and \( \varepsilon_{s2} \) are the loadings and errors of \( s_1 \) and \( s_2 \), SAT is the latent variable satisfaction, and \( V(SAT) \) is the variance of SAT.

Similarly, the covariance of \( s_1 \) and \( s_5 \) is determined by

\[ \sigma_{15} = \lambda_{s1}\lambda_{s5}V(SAT) = \lambda_{s1}V(SAT) \]

since \( \lambda_{s5} \) is fixed at 1 (see Table 4). Thus \( \lambda_{s1} = \sigma_{15}/V(SAT) \), and \( \sigma_{12} = [\sigma_{15}/V(SAT)]\lambda_{s2}V(SAT) = \sigma_{15}\lambda_{s2} \). Thus

\[ \lambda_{s2} = \sigma_{12}/\sigma_{15} \]  

Similarly \( \lambda_{s3} = \sigma_{13}/\sigma_{15} \), and \( \lambda_{s4} = \sigma_{14}/\sigma_{15} \).

Because \( \sigma_{25} = \lambda_{s2}\lambda_{s5}V(SAT) = \lambda_{s2}V(SAT) \), and \( \lambda_{s2} \) was determined above, the variance of SAT is given by

\[ V(SAT) = \varphi_{SAT,SAT} = \sigma_{25}/\lambda_{s2} = \sigma_{25}/[\sigma_{12}/\sigma_{15}] = \sigma_{25}\sigma_{15}/\sigma_{12} \]

where \( \varphi_{SAT,SAT} \) is the variance of SAT. As a result

\[ \lambda_{s1} = \sigma_{15}/\varphi_{SAT,SAT} = \sigma_{15}/[\sigma_{25}\sigma_{15}/\sigma_{12}] = \sigma_{15}\sigma_{12}/\sigma_{25}\sigma_{15} = \sigma_{12}/\sigma_{25} \]

Thus the loadings and the variance of SAT are identified.

For the errors of the indicators of SAT, since \( \sigma_{11} = V(\lambda_{s1}SAT + \varepsilon_{s1}) = \lambda_{s1}^2\varphi_{SAT,SAT} + V(\varepsilon_{s1}) \),

\[ V(\varepsilon_{s1}) = \theta_{\varepsilon s1} = \sigma_{11} - \lambda_{s1}^2\varphi_{SAT,SAT} \]
where $\theta_{s1}$ is the variance of $\varepsilon_{s1}$. The remaining errors, $\theta_{s2}$, $\theta_{s3}$, $\theta_{s4}$, and $\theta_{s5}$, are determined similarly.

The loadings, errors and variance of EXIT are determined similarly.

For the single indicator latent variable intercorrelations with SAT,

$$\sigma_{s5,s5} = C(x, \lambda_{s5}SAT + \varepsilon_{s5}) = \lambda_{s5}^2C(x, SAT) = C(x, SAT) = \phi_{x,SAT},$$

where $\phi_{x,SAT}$ is the correlation of $x$ with SAT, and $x \in \{YRS, OPN, R/E, REV, CMP, ROI\}$.

The correlation between SAT and EXI is determined by

$$\sigma_{s5,e4} = C(\lambda_{s5}SAT + \varepsilon_{s5}, \lambda_{e4}EXI + \varepsilon_{e4}) = \lambda_{s5}^2\lambda_{e4}^2\phi_{SAT,EXI} = \phi_{SAT,EXI},$$

since $\lambda_{s5} = \lambda_{e4} = 1$ (see Table 4).

Therefore the Figure 1 measurement parameters are identified.

For the step 2 structural model parameters, we will show the identification of the upper half of the Figure 1 structural equation model. The lower half is determined similarly. The structural model parameters of the upper half of the Figure 1 structural equation model are given in matrix notation by

$$\begin{bmatrix}
\gamma \\
\beta \\
\zeta
\end{bmatrix} = \begin{bmatrix}
\phi_{SAT,EXI} \\
\phi_{SAT,R/E} \\
\phi_{SAT,CMP}
\end{bmatrix}$$

where $\gamma$ and $\beta$ are the structural coefficients, and $\zeta$ is a disturbance term.

Using this equation for the determination of EXI, the covariance of SAT and EXI is given by

$$\phi_{SAT,EXI} = C(SAT,EXI) = C(SAT,\gamma_{EXI,REV}REV+\beta_{EXI,SAT}SAT+\beta_{EXI,OPN}OPN+\beta_{EXI,YRS}YRS+\beta_{EXI,R/E}R/E+\beta_{EXI,CMP}CMP+\zeta_{EXI})$$

The covariance of OPN, YRS, R/E and CMP with EXI can be written similarly and the result is five equations in five unknowns, the five structural coefficients for EXI ($\gamma_{EXI,REV}$, $\beta_{EXI,SAT}$, $\beta_{EXI,OPN}$, $\beta_{EXI,YRS}$, and $\beta_{EXI,R/E}$). Because this system of equations is solvable for the five structural coefficients, the structural coefficients for EXI are identified.

For the structural coefficients of REV

$$\phi_{EXI,REV} = C(EXI,REV) = C(EXI,\gamma_{REV,EXI}EXI+\beta_{REV,CMP}CMP+\zeta_{REV})$$

The covariance of CMP and R/E with REV is similar and produces a system of three equations in three unknowns, the three structural coefficients for REV ($\gamma_{REV,EXI}$, $\beta_{REV,CM}$, and $\beta_{REV,R/E}$). Thus the structural coefficients for REV are identified.

For the structural disturbance terms

$$\phi_{EXI,EXI} = V(EXI) = V(\gamma_{EXI,REV}REV+\beta_{EXI,SAT}SAT+\beta_{EXI,OPN}OPN+\beta_{EXI,YRS}YRS+\beta_{EXI,R/E}R/E+\zeta_{EXI})$$
Thus \( V(\zeta_{\text{rev}}) = \Phi_{\text{exi}, \text{exi}} - A - B \). The variance of \( \zeta_{\text{rev}} \) is determined similarly. For the covariance of \( \zeta_{\text{exi}} \) and \( \zeta_{\text{rev}} \),

\[
\Phi_{\text{exi, rev}} = C(\text{EXI, REV}) = \Phi_{\text{exi, rev}} + \beta_{\text{exi}} \cdot \text{YRS} + \Phi_{\text{exi, opn}} + \beta_{\text{exi}} \cdot \text{YRS} + \beta_{\text{exi}, r/e} + \Phi(\zeta_{\text{exi}})
\]

where

\[
A = \Phi_{\text{exi, rev}} + \beta_{\text{exi}} \cdot \text{SAT} + \beta_{\text{exi}, \text{opn}} + \beta_{\text{exi}} \cdot \text{YRS} + \beta_{\text{exi}, r/e} + \Phi(\zeta_{\text{exi}})
\]

and

\[
B = 2 [\Phi_{\text{exi, rev}} + \beta_{\text{exi}} \cdot \text{SAT} + \beta_{\text{exi}, \text{opn}} + \beta_{\text{exi}} \cdot \text{YRS} + \beta_{\text{exi}, r/e} + \Phi(\zeta_{\text{exi}}) - \beta_{\text{exi}} \cdot \text{SAT} + \beta_{\text{exi}, \text{opn}} + \beta_{\text{exi}} \cdot \text{YRS} + \beta_{\text{exi}, r/e} + \Phi(\zeta_{\text{exi}})]
\]

Thus \( C(\zeta_{\text{exi}}, \zeta_{\text{rev}}) = \Phi_{\text{exi, rev}} - D \), and the upper half of Figure 1 is identified. The measurement and structural parameters of the lower half of Figure 1 are determined similarly, and are identified.
Abstract

The article investigates the moderating effect of overall relationship satisfaction on the relationship between the attractiveness of the alternative relationship and exiting the relationship in a marketing channel. The investigation involves a structural equation modeling technique proposed by Ping (1993a). The technique specifies the satisfaction-alternative attractiveness interaction using products of the indicators of satisfaction and alternative attractiveness, as Kenny and Judd (1984) suggested. However it uses fixed values for the indicator loadings and error variances that are determined in a measurement model.

The results suggest that overall relationship satisfaction moderates the alternative attractiveness-exiting effect. The article provides several interesting observations and suggestions regarding the use of the estimation technique proposed by Ping (1993a).
Does Marketing Channel Satisfaction Moderate the Association Between Alternative Attractiveness and Exiting? An Application of Ping's Technique

Channel relationship termination has received some attention recently (Ping and Dwyer, 1991; Ping, 1993b). These studies generally contend that exiting a channel relationship has several antecedents, among them overall satisfaction, and the attractiveness of the best alternative relationship. The associations between these variables have rightly been modeled using linear effects, and plausible non-linear effects have been assumed to be absent. This study investigates a plausible nonlinear association involving channel relationship exiting, the interaction of overall satisfaction and alternative attractiveness in their effect on exiting.

The investigation uses a field survey and a proposed structural equation technique due to Ping (1993b) that estimates interaction and quadratic effects for latent variables under certain conditions. The technique involves structural equation analysis, and is carried out in two steps, paralleling the two-step estimation approach for structural equation suggested by Anderson and Gerbing (1988) (i.e., estimate the measurement model before estimating the structural model).

In particular, the loadings and error variances for the indicators of the linear latent variables are estimated in a measurement model. Then these loadings and error variances are used to calculate the loadings and error variances for the indicators of latent interaction and quadratic variables. The relations among the linear and nonlinear latent variables are then estimated in a
structual model. The indicators of the interaction and quadratic latent variables in the structural model are specified as the products of the indicators of the linear latent variables that comprise the nonlinear latent variables. The calculated loadings and error variances for these indicator products are specified as fixed rather than free variables in the structural model under the appropriate conditions.

After summarizing the current picture of channel relationship exiting, we propose and test the satisfaction-alternative attractiveness effect using a field survey and Ping's technique. We then discuss the implications of the test, and the use of the estimation technique.

Channel Relationship Termination

In an investigation of generalized responses to channel relationship problems Ping (1993b) observed that the inclination to exit a channel relationship was negatively associated with overall relationship satisfaction, and positively associated with the attractiveness of the best available alternative relationship. The specification of these relationships involved a structural equation analysis of a model that implicitly posited only linear relationships among the variables in these relationships.

In a conceptualization of the history of a buyer-seller relationship Dwyer, Schurr and Oh (1987) proposed that these relationships pass through several phases (also see Ford, 1980; and Gadde and Mattsson, 1987). Both parties to the buyer-seller relationship, they argued, pass through awareness, exploration, expansion, commitment, and, ultimately, dissolution phases of the
relationship. In the committed phase they noted that the exchange partners achieve a level of satisfaction that precludes other primary exchange partners. They stated that awareness of alternative relationships is maintained but without constant comparisons to the current relationship. One plausible result of this preclusionary state is that for satisfied subject firms increases in the attractiveness of alternative relationships would not affect relationship exiting intention. However since Ping (1993b) observed a positive association between alternative attractiveness and exiting, this suggests that this association is contingent on the level of overall relationship satisfaction. In particular when overall satisfaction is lower, changes in alternative attractiveness are positively associated with exiting. At higher levels of satisfaction, however, this association is not significant. Accordingly we postulate that,

H1: Overall relationship satisfaction moderates the association between alternative attractiveness and exiting. Specifically,

H2a: At higher levels of overall relationship satisfaction there is no association between alternative attractiveness and exiting,

and

H2b: At lower levels of overall relationship satisfaction alternative attractiveness is positively associated with exiting.

In the balance of the article we will test these assertions using data provided by a field survey. We begin by describing the measurement of the study variables, satisfaction, alternative
attractiveness, and exiting.

Measurement

Satisfaction, the global evaluation of relationship fulfillment by the subject firm (Dwyer and Oh, 1987), was measured using a modification of the Dwyer and Oh satisfaction scale inspired by Gaski and Nevin (1985). The domain of satisfaction includes all the characteristics of the buyer-seller relationship that the subject firm deems "rewarding, profitable, or instrumental" (Rukert and Churchill, 1984), or costly, unfair or frustrating (Ping 1993b). The items in the satisfaction measure assessed overall satisfaction with the relationship, fairness in the exchange relationship, and the degree to which partner was a good company with which to do business.

The attractiveness of the best alternative relationship, the subject firm's estimate of the satisfaction available in the best available alternative relationship, was operationalized as the subject firm's perception of the overall fulfillment available from the best alternative supplier, in addition to the overall fulfillment available in the existing relationship (Ping 1993b). This conceptualization encompasses the subject firm's generalized perceptions of the rewards and costs available in the most salient available relationship alternative. The items in this measure dealt with the subject firm's evaluation of how good a supplier company the alternative would be, its fairness, products and services, and policies; and, in general, how satisfied the subject firm would be the alternative supplier.

Exiting, physically leaving the relationship, was operationalized as the propensity to terminate the primary supplier relationship (Ping 1993b). This conceptualization taps the degree of inclination to
discontinue the relationship with the primary supplier. The items in
the exiting measure concerned thinking of exiting, looking for a
replacement relationship, considering a replacement, and the intention
to exit.

These measures were combined into a self administered
questionnaire that was mailed to a sample of the study population. The
analysis of the resulting data was conducted using structural equation
analysis with a satisfaction-alternative attractiveness latent
variable interaction specified using Ping's technique. Before
describing the study, some background on this approach would be
appropriate.

Non-linear Latent Variables

Kenny and Judd (1984) proposed that interaction and quadratic
effects for latent variables could be estimated using structural
equation analysis and products of observed variables. Kenny and Judd
proposed that, for example, the products the observed indicators for
the linear latent variables X and Z could be used to specify the
latent interaction variable XZ. Specifically, if and Z had indicators
x₁, x₂, z₁, and z₂, XZ could be specified using products of these
indicators, i.e., x₁z₁, x₁z₂, x₂z₁, and x₂z₂.

In addition Kenny and Judd showed that, under certain conditions,
the variance of these indicator products is determined by the variance
of their constituent indicators. They showed that, for example, the
variance of the indicator x₁z₁ depends on 8x₁, 8z₁, Var(X), Var(Z), 2x₁,
and 2z₁, where Var(X) and Var(Z) are the variances of the latent
variables X and Z, 8x₁, and 8z₁ are the loadings of x₁ on X and z₁ on Z,
and 2x₁ and 2z₁ are the variances of the error terms x₁ and z₁. Assuming
the latent variables X and Z are independent of the error terms $x_1$ and $z_1$, the error terms are independent of each other, and $x_1$, $z_1$, $x_1$ and $z_1$ are normally distributed, they showed the variance of $x_1z_1$ is given by

$$\text{Var}(x_1z_1) = \text{Var}[(8_{x_1}X + x_1)(8_{z_1}Z + z_1)]$$

$$= 8_{x_1}^28_{z_1}^2\text{Var}(XZ) + 8_{x_1}^2\text{Var}(X)2_{x_1}$$

$$+ 8_{z_1}^2\text{Var}(Z)2_{x_1} + 2_{x_1}2_{z_1} \quad (1)$$

Then they specified latent variables such as $XZ$ with indicators such as $x_1z_1$ by constraining the indicator loading and error term for $x_1z_1$ ($8_{x_1z_1}$ and $2_{x_1z_1}$) to be the combinations of linear-terms-only model parameters shown in equation 1, i.e.,

$$8_{x_1z_1} = 8_{x_1}8_{z_1} \quad (2)$$

and

$$2_{x_1z_1} = 8_{x_1}^2\text{Var}(X)2_{x_1} + 8_{z_1}^2\text{Var}(Z)2_{x_1} + 2_{x_1}2_{z_1} \quad (3)$$

They also used COSAN (currently a subprocedure of the SAS procedure CALIS) which is particularly suited to modeling structural equations with nonlinear terms such as those in equations 2 and 3.

While the Kenny and Judd technique is an important theoretical contribution, the technique has proven difficult for most researchers to implement (Aiken and West, 1991). Ping (1993a) noted that the number of dummy variables required to specify each indicator of a non-linear variable using the Kenny and Judd technique (e.g., one for each term in equations 2 and 3) can become overwhelming for models with many indicators or several non-linear latent variables.

Hayduk (1987) and others have proposed a variation of the Kenny and Judd technique that can be implemented using LISREL (Jöreskog and Sörbom, 1989) and EQS (Bentler, 1989). The technique is difficult to summarize, however, and the interested reader is directed to chapter 7
of Hayduk (1987) for the details of the technique. Unfortunately, this technique also requires the creation of many dummy variables.

As a result Ping (1993b) proposed an additional variation of the Kenny and Judd technique that requires no dummy variables and can be implemented in LISREL and EQS. Under the Kenny and Judd normality assumptions stated above and assuming the unidimensionality of the latent variable indicators, Ping argued that the loadings and error variances for the Kenny and Judd product indicators of an interaction or quadratic latent variable need not be estimated in the structural model. Specifically he demonstrated that parameter estimates from the measurement model (e.g., $8_{x1}$, $8_{z1}$, $\text{Var}(X)$, $\text{Var}(Z)$, $2_{x1}$, and $2_{z1}$), can be combined into structural model constants (e.g., $8_{x1z1} = 8_{x1}8_{z1}$ and $2_{x1z1} = 8_{x1}^2\text{Var}(X)2_{x1} + 8_{z1}^2\text{Var}(Z)2_{x1} + 2_{x1}2_{z1}$). Then the structural model can be estimated with the interaction indicator loadings and error variances (e.g., $8_{x1z1}$ and $2_{x1z1}$) specified as fixed values (equal to $8_{x1}8_{z1}$ and $8_{x1}^2\text{Var}(X)2_{x1} + 8_{z1}^2\text{Var}(Z)2_{x1} + 2_{x1}2_{z1}$). This is possible, he argued, because with sufficient unidimensionality the measurement parameters for a latent variable's indicators (e.g., $8_{x1}$, $8_{z1}$, $\text{Var}(X)$, $\text{Var}(Z)$, $2_{x1}$, and $2_{z1}$) are trivially variant between the measurement and structural models (Anderson and Gerbing, 1988). In different words the measurement parameter estimates for the indicators of a unidimensional latent variable change very little between the measurement and structural models (frequently only in the third decimal place). Therefore measurement model estimates can be specified as constants in the structural model, and the loadings and error variances of the indicators of non-linear latent variables need not be estimated in a structural model.
He argued further that the unidimensionality assumption enables the omission of the non-linear constructs from the measurement model with no effect on the parameter estimates for the linear constructs because, by the definition of unidimensionality, unidimensional constructs are unaffected by other latent variables. Similarly adding or deleting unidimensional constructs in the structural model does not affect the measurement parameter estimates for the added or other latent variables in the structural model.

In summary, Ping's technique involves,

- verifying indicator normality—however, maximum likelihood and generalized least squares estimates are robust to departures from normality (Anderson and Amemiya, 1985, 1986; Boomsma, 1983; Browne, 1987; Harlow, 1985; Sharma, Durvasula and Dillon, 1989; Tanaka, 1984),
- assuming the latent variables are independent of the error terms, and the error terms are independent of each other,
- unidimensionalizing the linear latent variables,
- estimating loadings and error variances for the linear independent variable indicators using a measurement model, then combining these estimates into equation 2 and 3 estimates of the loadings and error variances for the nonlinear latent variable indicators,
- specifying these equation 2 and 3 estimates as fixed values in a structural model, and estimating that model.

The balance of the paper will describe the use of Ping's technique in a field survey that tests the hypothesized satisfaction-
alternative attractiveness interaction.

Method

Returning to the study, the satisfaction, alternative attractiveness, and exiting items were combined with five point balanced Likert scales. The survey population was hardware retailers, and the sampling frame was the subscription list of a popular hardware trade publication. Sampling involved n-th name selects of 100 pretest names and 600 final test names. The pretest responses were used to verify the psychometric properties of the measures. The resulting measures appeared to be content valid, unidimensional, internally and externally consistent (see Gerbing and Anderson, 1984), and had coefficient alpha's of .8 or above. The final test produced 288 responses after two postcard follow-ups. The psychometric properties of the measures were reexamined using these responses and item-to-total correlations, coefficient alpha calculations, ordered similarity coefficients (Hunter, 1973), multiple group analysis (Anderson, Gerbing and Hunter, 1987), and LISREL single factor analysis (Jöreskog, 1993, pp. 297, 313). The measures were content valid, unidimensional, internally and externally consistent, and had latent variable reliabilities of .9 or above and average variance extracteds of .7 or above (Fornell and Larker, 1981). Table 1 summarizes the psychographic properties of the final test scales.

The normality of the indicators of satisfaction, alternative attractiveness and exiting was then assessed, and the measurement model for the linear-terms-only model shown in Figure 1 was estimated using EQS and maximum likelihood. The resulting measurement parameter estimates for satisfaction and alternative attractiveness are shown in
Table 2. These estimates were combined to produce the equations 2 and 3 loadings and error variances for the satisfaction-alternative attractiveness interaction indicators shown in the Figure 2 structural model. This structural model was then estimated using EQS and maximum likelihood by fixing the loadings and error variances for the product indicators at the Table 2 values. The results are shown in Table 3.

Because the use of product indicators in a structural equation model renders the model formally non normal, estimates of the standard errors for the structural effect coefficients cannot be trusted (Hu, Bentler and Kano, 1992). For emphasis the effect estimates are robust to departures from normality but the standard errors do not. The structural model was therefore re-estimated using EQS's "ROBUST" option to produce more appropriate standard error and chi squared statistics (Satorra and Bentler, 1988) (see Bentler, 1989, p.217 et seq.; and Hu, Bentler and Kano, 1992). We also estimated the Figure 2 model using ordinary least squares regression for comparison. These regression estimates were produced by averaging the indicators for satisfaction, alternative attractiveness, and exiting, and forming the interaction term by forming the product variable satisfaction-alternative attractiveness in each case. These regression results are also shown in Table 3.

We will discuss these results and their implications next.

Discussion

The hypothesized associations were supported. Satisfaction moderated the alternative attractiveness-exiting association: the alternative attractiveness-exiting interaction effect coefficient was significant (see Table 3). In addition Table 4 shows the alternative
attractiveness-exiting effect coefficient with the interaction effect of satisfaction at selected levels of satisfaction. As shown in this table, satisfaction attenuated the alternative attractiveness-exiting association as the level of satisfaction increased. In particular, at higher levels of satisfaction (e.g., above 4 which corresponded to "Agree") the alternative attractiveness-exiting association was non significant. At lower levels of satisfaction the alternative attractiveness-exiting association, however, was significant.

These results may have implications for practitioners. The observed lack of association between exiting and alternative attractiveness at higher levels of satisfaction in this study suggests that increases in the attractiveness of an alternative (competition) by itself may not necessarily tempt satisfied customer firms to exit their current buyer-seller relationship. In other words an alternative's efforts to be more attractive may not, by itself, increase exiting inclinations: decreased satisfaction may also be required. Viewing these results from a lower satisfaction perspective, increases in alternative attractiveness were associated with increases in exiting inclinations for less satisfied buyers in the study. This suggests that less satisfied customer firms may be vulnerable to competitive moves aimed at increasing competitor attractiveness.

In addition the model explained 65% of the variance in exiting (see "Squared Multiple Correlation for EXI," Table 3), which is notable for marketing studies. While unmodeled antecedents of exiting may remain to be identified, their combined contribution to explaining variance in exiting in this context may not be large. For the busy channel manager this in turn suggests that satisfaction maintenance
may be sufficient for relationship maintenance.

Turning to the use of Ping's technique in this study, the efficacy of the technique was apparent in the study. The coefficient estimates were directionally similar to the regression estimates. In addition specifying the Figure 2 interaction involved considerably less effort than a Kenny and Judd/COSAN specification would have required, we suspect. A Kenny and Judd/COSAN specification of the Figure 2 model would have required the creation of 80 additional dummy variables, one for each term in equations 2 and 3.

While the regression estimates were similar to the structural equation estimates, they cannot be trusted for variables measured with error: OLS regression estimates are known to be biased and inefficient for variables measured with error (Busemeyer and Jones, 1983). The regression standard error estimates were different from those from the structural equation analysis, however, especially for the interaction coefficient, the key parameter in the study. While there are regression techniques for variables measured with error (see Feucht, 1989 for a summary), these techniques currently lack standard error estimators, and as a result regression is inappropriate for estimating effects among latent variables.

However, regression estimates of the satisfaction, alternative attractiveness, and the interaction effects are useful as starting values for the structural equation analysis. We used a personal computer version of EQS, and the starting values from regression reduced the EQS execution times dramatically.

Starting values from several other sources were also used for the remaining free parameters in the structural model. Measurement model
estimates were used for the starting values for the linear variable variances, covariances, loadings and error variances. A starting value for the variance of the satisfaction-alternative attractiveness variable was determined by averaging the indicators of satisfaction and alternative attractiveness in each case, forming the product of these two averaged variables in each case, and then calculating the variance of the result using standard descriptive statistics software. An estimate of the variance of the structural disturbance term was calculated by hand using the regression value of $R^2$ and the measurement model estimate of the variance of exiting (i.e., \( \text{Var(.)}.\text{Var(EXI)}(1-R^2) \)).

Several additional comments on the utilization of Ping's technique may be of interest. Despite the apparent unidimensionality of the latent variables the measurement and structural model estimates for the measurement parameters of satisfaction and alternative attractiveness were different, typically in the third decimal place. As a result an iterative approach was used to produce the Table 3 results. This was accomplished by recomputing the equation 2 and 3 values using the first structural equation estimates of the measurement parameters for satisfaction and alternative attractiveness (i.e., 8's, 2's, variances and covariances), and re-estimating the structural model with these revised equation 2 and 3 values fixed. Table 3, as a result, contains the estimates from the second structural model run. The effect of this second structural model estimation was to base the equation 2 and 3 values on structural model estimates, rather than measurement model estimates. Parenthetically these refined equation 2 and 3 values had little effect on the coefficient, standard error or chi-squared estimates between the two
structural equation estimations.

We obtained inadmissible solutions when the linear terms and the non linear terms were specified as correlated in the structural model. As a result the Figure 2 structural model shows correlations between the linear variables only. Because an interaction is clearly correlated with its unadjusted linear constituents, this may be a limitation of Ping's technique. Kenny and Judd (1984) also appeared to fix the linear-interaction term covariances at zero (although they freed the covariance between a linear term X and the interaction X*(Z^2) in their third example).

The t-values for the ML coefficient estimates and those for ML estimates with EQS's ROBUST option were similar (see Table 3). This suggests that the standard errors produced by Ping's technique (and indicator product techniques in general) may be robust to formal departures from normality.

The chi-squared statistic, however, appeared to be distorted by the formal non normality of the product indicators (see Table 3). The unscaled null (independence) model and the Figure 2 model chi-squared statistics were large and misleading because the null model appeared to fit the data better than the Figure 2 model. As a result the Comparative Fit Index (Bentler, 1990), which relies on the chi-squared statistic, was also distorted. The scaled chi-squared statistic available with the ROBUST option appeared to be more useful. Using the scaled chi-squared statistic the Figure 2 model appeared to fit the data (the Chi-Squared p-value was 1), and it produced a Comparative Fit Index of 1.

These observations suggest there is more work needed in this
Summary

The study investigated an hypothesized moderating effect of overall relationship satisfaction on the association between exiting and the attractiveness of the alternative relationship in a marketing channel. The results suggest that the moderating effect is present in the study context, and that at higher levels of satisfaction, there is no alternative attractiveness-exiting effect in the study population.

The investigation used Ping's technique for estimating non-linear latent variable effects. The results suggest that the technique is reasonably easy to use with existing popular estimation software, in this case EQS. The effect and standard error estimates appeared to be robust to the formal departure from normality inherent when product indicators are used. However the chi-squared estimates appeared to be affected by the formal non normality, and the scaled chi-squared estimates available in EQS's ROBUST option appeared to be more appropriate.
References


Harlow, L.L. (1985), Behavior of Some Elliptical Theory Estimators


Table 1
Psychometric Properties of the Measures

<table>
<thead>
<tr>
<th>Concept</th>
<th>Parameter</th>
<th>Measure</th>
<th>Parameter</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>Items</td>
<td>5</td>
<td>df</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>5</td>
<td>p-value</td>
<td>.40</td>
</tr>
<tr>
<td></td>
<td>CFI</td>
<td>1.00</td>
<td>Avg. Std. Resid.</td>
<td>.006</td>
</tr>
<tr>
<td></td>
<td>AVE</td>
<td>.77</td>
<td>LV Reliability</td>
<td>.97</td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td>.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative</td>
<td>Items</td>
<td>4</td>
<td>df</td>
<td>2</td>
</tr>
<tr>
<td>Attractiveness</td>
<td>Chi-Squared</td>
<td>1</td>
<td>p-value</td>
<td>.19</td>
</tr>
<tr>
<td></td>
<td>CFI</td>
<td>.99</td>
<td>Avg. Std. Resid.</td>
<td>.004</td>
</tr>
<tr>
<td></td>
<td>AVE</td>
<td>.78</td>
<td>LV Reliability</td>
<td>.91</td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td>.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exit</td>
<td>Items</td>
<td>6</td>
<td>df</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>9</td>
<td>p-value</td>
<td>.43</td>
</tr>
<tr>
<td></td>
<td>CFI</td>
<td>1.00</td>
<td>Avg. Std. Resid.</td>
<td>.009</td>
</tr>
<tr>
<td></td>
<td>AVE</td>
<td>.72</td>
<td>LV Reliability</td>
<td>.91</td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td>.96</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Items = Number of items in the scale.  
  df = Chi-squared statistic degrees of freedom.  
  Chi-Squared = Chi-squared statistic value.  
  p-value = Attained significance of the chi-squared statistic.  
  CFI = Comparative Fit Index (Bentler 1990).  
  Avg. Std. Resid. = The average of the standardized covariance matrix residuals.  
  AVE = Average Variance Extracted (Fornell and Larker 1981).  
  Alpha = Coefficient (Cronbach) alpha value.
Table 2
Measurement Model Results

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>Parameter</th>
<th>Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>$s_1$</td>
<td>0.79</td>
<td>$s_4$</td>
<td>0.12</td>
</tr>
<tr>
<td>$s_2$</td>
<td>0.88</td>
<td>$s_5$</td>
<td>0.10</td>
</tr>
<tr>
<td>$s_3$</td>
<td>1.00</td>
<td>$s_1$</td>
<td>0.27</td>
</tr>
<tr>
<td>$s_4$</td>
<td>0.87</td>
<td>$s_2$</td>
<td>0.24</td>
</tr>
<tr>
<td>$s_5$</td>
<td>0.94</td>
<td>$s_3$</td>
<td>0.07</td>
</tr>
<tr>
<td>$s_1$</td>
<td>0.92</td>
<td>$s_4$</td>
<td>0.24</td>
</tr>
<tr>
<td>$s_2$</td>
<td>0.90</td>
<td>$s_1$</td>
<td>0.52</td>
</tr>
<tr>
<td>$s_3$</td>
<td>1.00</td>
<td>$s_2$</td>
<td>0.19</td>
</tr>
<tr>
<td>$s_4$</td>
<td>0.78</td>
<td>$s_3$</td>
<td>0.11</td>
</tr>
<tr>
<td>$s_5$</td>
<td>0.84</td>
<td>$s_4$</td>
<td>0.32</td>
</tr>
<tr>
<td>$s_1$</td>
<td>0.83</td>
<td>$s_5$</td>
<td>0.09</td>
</tr>
<tr>
<td>$s_2$</td>
<td>1.00</td>
<td>$s_6$</td>
<td>0.12</td>
</tr>
<tr>
<td>$s_3$</td>
<td>0.94</td>
<td>$N_{Sat}$</td>
<td>0.51</td>
</tr>
<tr>
<td>$s_5$</td>
<td>0.96</td>
<td>$N_{SataAlt}$</td>
<td>-0.37</td>
</tr>
<tr>
<td>$s_6$</td>
<td>0.92</td>
<td>$N_{SatExi}$</td>
<td>-0.43</td>
</tr>
<tr>
<td>$s_1$</td>
<td>0.16</td>
<td>$N_{Alt}$</td>
<td>0.84</td>
</tr>
<tr>
<td>$s_2$</td>
<td>0.13</td>
<td>$N_{AltExi}$</td>
<td>0.51</td>
</tr>
<tr>
<td>$s_3$</td>
<td>0.10</td>
<td>$N_{Exi}$</td>
<td>0.79</td>
</tr>
</tbody>
</table>

Equations 2 and 3 Values:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$s_{1a1}$</td>
<td>.533</td>
<td>$s_{1a2}$</td>
<td>.257</td>
</tr>
<tr>
<td>$s_{1a2}$</td>
<td>.509</td>
<td>$s_{1a3}$</td>
<td>.239</td>
</tr>
<tr>
<td>$s_{1a3}$</td>
<td>.625</td>
<td>$s_{1a4}$</td>
<td>.180</td>
</tr>
<tr>
<td>$s_{1a4}$</td>
<td>.384</td>
<td>$s_{2a1}$</td>
<td>.207</td>
</tr>
<tr>
<td>$s_{2a1}$</td>
<td>.669</td>
<td>$s_{2a2}$</td>
<td>.242</td>
</tr>
<tr>
<td>$s_{2a2}$</td>
<td>.639</td>
<td>$s_{2a3}$</td>
<td>.224</td>
</tr>
<tr>
<td>$s_{2a3}$</td>
<td>.784</td>
<td>$s_{2a4}$</td>
<td>.151</td>
</tr>
<tr>
<td>$s_{2a4}$</td>
<td>.482</td>
<td>$s_{3a1}$</td>
<td>.251</td>
</tr>
<tr>
<td>$s_{3a1}$</td>
<td>.852</td>
<td>$s_{3a2}$</td>
<td>.231</td>
</tr>
<tr>
<td>$s_{3a2}$</td>
<td>.815</td>
<td>$s_{3a3}$</td>
<td>.140</td>
</tr>
<tr>
<td>$s_{3a3}$</td>
<td>1.000</td>
<td>$s_{3a4}$</td>
<td>.208</td>
</tr>
<tr>
<td>$s_{3a4}$</td>
<td>.615</td>
<td>$s_{4a1}$</td>
<td>.231</td>
</tr>
<tr>
<td>$s_{4a1}$</td>
<td>.657</td>
<td>$s_{4a2}$</td>
<td>.213</td>
</tr>
<tr>
<td>$s_{4a2}$</td>
<td>.628</td>
<td>$s_{4a3}$</td>
<td>.142</td>
</tr>
<tr>
<td>$s_{4a3}$</td>
<td>.770</td>
<td>$s_{4a4}$</td>
<td>.189</td>
</tr>
<tr>
<td>$s_{4a4}$</td>
<td>.473</td>
<td>$s_{5a1}$</td>
<td>.227</td>
</tr>
<tr>
<td>$s_{5a1}$</td>
<td>.755</td>
<td>$s_{5a2}$</td>
<td>.209</td>
</tr>
<tr>
<td>$s_{5a2}$</td>
<td>.722</td>
<td>$s_{5a3}$</td>
<td>.128</td>
</tr>
<tr>
<td>$s_{5a3}$</td>
<td>.885</td>
<td>$s_{5a4}$</td>
<td>.142</td>
</tr>
</tbody>
</table>
Table 3
Structural Model Estimation Results

Structural Equation Analysis Estimates:

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>Parameter</th>
<th>Estimate</th>
<th>t-value</th>
<th>ML</th>
<th>ROBUSTa</th>
</tr>
</thead>
<tbody>
<tr>
<td>s1</td>
<td>0.79</td>
<td>s5</td>
<td>0.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>s2</td>
<td>0.88</td>
<td>s1</td>
<td>0.27</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>s3</td>
<td>1.00</td>
<td>s2</td>
<td>0.24</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>s4</td>
<td>0.87</td>
<td>s3</td>
<td>0.08</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>s5</td>
<td>0.94</td>
<td>s4</td>
<td>0.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a1</td>
<td>0.92</td>
<td>e1</td>
<td>0.53</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a2</td>
<td>0.90</td>
<td>e2</td>
<td>0.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a3</td>
<td>1.00</td>
<td>e3</td>
<td>0.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a4</td>
<td>0.78</td>
<td>e4</td>
<td>0.32</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o1</td>
<td>0.84</td>
<td>e5</td>
<td>0.09</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o2</td>
<td>0.83</td>
<td>e6</td>
<td>0.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o3</td>
<td>1.00</td>
<td>N_SAT</td>
<td>0.50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o4</td>
<td>0.94</td>
<td>N_SATALT</td>
<td>-0.37</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o5</td>
<td>0.96</td>
<td>N_ALT</td>
<td>0.84</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>o6</td>
<td>0.92</td>
<td>N_SATALT</td>
<td>17.95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>s1</td>
<td>0.16</td>
<td>&amp;EXI</td>
<td>0.34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>s2</td>
<td>0.13</td>
<td>&amp;EXI,SAT</td>
<td>-0.35</td>
<td>4.59</td>
<td>4.79</td>
<td></td>
</tr>
<tr>
<td>s3</td>
<td>0.10</td>
<td>&amp;EXI,ALT</td>
<td>0.65</td>
<td>10.58</td>
<td>9.61</td>
<td></td>
</tr>
<tr>
<td>s4</td>
<td>0.12</td>
<td>&amp;EXI,SATALT</td>
<td>-0.05</td>
<td>5.64</td>
<td>5.45</td>
<td></td>
</tr>
</tbody>
</table>
Fit Indices

<table>
<thead>
<tr>
<th></th>
<th>ML</th>
<th>ROBUST^a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-Squared Statistic Value</td>
<td>88248</td>
<td>380</td>
</tr>
<tr>
<td>p-Value of Chi-Squared Value</td>
<td>.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Bentler (1990) Comparative Fit Index</td>
<td>.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Null Model ( \Pi^2 )</td>
<td>25884</td>
<td>18831</td>
</tr>
<tr>
<td>Chi-Squared Degrees of Freedom</td>
<td>595</td>
<td>595</td>
</tr>
<tr>
<td>Squared Multiple Correlation for EXI</td>
<td>.65</td>
<td></td>
</tr>
<tr>
<td>Total Coef. of Determination</td>
<td>.65</td>
<td></td>
</tr>
</tbody>
</table>

OLS Regression Estimates:

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Independent Variable</th>
<th>b Coefficient</th>
<th>F-value p-value</th>
<th>(p) R^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>EXI</td>
<td>SAT</td>
<td>-.287</td>
<td>.07</td>
<td>79.52  (.00) .52</td>
</tr>
<tr>
<td>EXI</td>
<td>ALT</td>
<td>.745</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>EXI</td>
<td>SATALT</td>
<td>-.100</td>
<td>.07</td>
<td></td>
</tr>
</tbody>
</table>

^a ML = Maximum Likelihood estimate.

Table 4
Satisfaction Moderation of the Alternative Attractiveness-Exiting Association

<table>
<thead>
<tr>
<th>SAT Value</th>
<th>ALT Coefficient</th>
<th>SE of the Coefficient</th>
<th>t-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.596</td>
<td>0.1239</td>
<td>4.80</td>
</tr>
<tr>
<td>2</td>
<td>0.539</td>
<td>0.1859</td>
<td>2.89</td>
</tr>
<tr>
<td>3</td>
<td>0.482</td>
<td>0.2510</td>
<td>1.91</td>
</tr>
<tr>
<td>4</td>
<td>0.425</td>
<td>0.3173</td>
<td>1.33</td>
</tr>
<tr>
<td>5</td>
<td>0.368</td>
<td>0.3841</td>
<td>0.95</td>
</tr>
</tbody>
</table>

\(^a\) Satisfaction ranged from 1 (=low) to 5 in the study.

\(^b\) The coefficient of ALT is given by 
\[ .65ALT - .05SAT \times ALT = (.65 - .05SAT)ALT. \]

\(^c\) The Standard Error of the ALT coefficient is given by

\[
\sqrt{\text{Var}(b_{ALT} - b_{SAT})} = \sqrt{\text{Var}(b_{ALT})} + \text{SAT}^2 \text{Var}(b_{SAT}) + 2\text{SAT Cov}(b_{ALT}, b_{SAT}) .
\]
Fig. 1. Linear-Terms-Only Measurement Model

\[ N's \]

\[ 8_{a1}'s \] \[ 8_{a1}'s \] \[ 8_{a1}'s \]

\[ s_1 \] \[ s_2 \] \[ s_3 \] \[ s_4 \] \[ s_5 \] \[ a_1 \] \[ a_2 \] \[ a_3 \] \[ a_4 \] \[ e_1 \] \[ e_2 \] \[ e_3 \] \[ e_4 \] \[ e_5 \] \[ e_6 \]

\[ s_1 \] \[ s_2 \] \[ s_3 \] \[ s_4 \] \[ s_5 \] \[ a_1 \] \[ a_2 \] \[ a_3 \] \[ a_4 \] \[ e_1 \] \[ e_2 \] \[ e_3 \] \[ e_4 \] \[ e_5 \] \[ e_6 \]

\textsuperscript{a} SAT = Satisfaction, ALT = Alternative Attractiveness, EXI = Exiting.
Fig. 2. Structural Model

SAT = Satisfaction, ALT = Alternative Attractiveness, SAT*ALT = Satisfaction−Alternative Attractiveness Interaction, EXI = Exiting.
The Effects of Satisfaction and Structural Constraints on Retailer Exiting, Voice, Loyalty, Opportunism and Neglect

Abstract

This article reports the results of a field survey of the relationship between hardware retailers' satisfaction and their response intentions when there are channel relationship problems. The objective was to test a model from the social psychology literature due to Rusbult, Zembrodt and Gunn (1982) of the relationships between the response intention variables; exiting, voice, loyalty, opportunism, and neglect, and their antecedents; satisfaction, and the "structural constraints" (Johnson 1982) of alternative attractiveness, investments and switching cost, using structural equation analysis. The results suggest that the model does apply to a channel context, and the study sheds some light on interfirm response intentions to interfirm relationship problems.

The channel legal literature regularly provides hints of responses to channel relationship problems (e.g., Business Electronics v. Sharp 1988, and Continental TV v. Sylvania 1977). One could ask several interesting questions about these troubled relationships, including what caused them to flounder and eventually terminate? Diminished relationship satisfaction is probably necessary, but is it always sufficient? Most Chrysler dealers did not terminate their Chrysler franchise during their satisfaction nadir accompanying Chrysler's restructuring in the 1970's.

As a result one could ask, what holds a troubled channel relationship together? Unattractive alternatives or high switching cost are plausible candidates, but are there other "structural constraints" in a channel relationship?

For a firm having supplier or institutional customer problems, are there other viable responses besides exiting? Anecdotal evidence suggests that channel relationship problems generate complaints. But, are there other responses as well?

This research proposes and tests a model, derived from the romantic relationships research of Rusbult, Zembrodt and Gunn (1982), which relates general responses to relationship problems

---

1 See for example "Legal Developments in Marketing," topic 4.2, in the Journal of Marketing.
(exiting, voice, loyalty, opportunism, and neglect), to antecedents of these responses (satisfaction, alternative attractiveness, investments, and switching cost). The research question was simply, does this model apply to buyer-seller relationships in an institutional context such as a marketing channel?

Conceptually this investigation concentrates on the committed and dissolution phases of Dwyer, Schurr and Oh's (1987) framework for buyer-seller relationship development. This channel relationship life cycle framework was comprised of several stages through which buyer-seller relationships pass to reach what Macneil (1974) described as relational exchanges, and Dwyer, Schurr and Oh termed the committed phase of the buyer-seller relationship.

While the committed phase is the locus of much of the current channel research, until recently channel research has paid little attention to the last phase: dissolution. As a result we know little, for example, of the factors affecting the termination of marketing channel relationships.

Illuminating the termination phase could help avoid channel relationship termination and its associated costs both economic and psychic. Anecdotal evidence suggests that once problems become endemic, relationship satisfaction declines, conflict increases, and monitoring costs increase on both sides of the relationship. The low satisfaction firm's relationship investments slow, and without exit barriers (Porter 1980) such as switching costs, the low satisfaction firm may exit the relationship. Exiting, in turn, involves costs. Exiting may obsolete transaction specific assets on both sides of the relationship. In addition it may require both firms to incur additional costs such as search, negotiation and monitoring costs, and make additional investments in transaction specific assets to establish and build a new exchange relationship.

---

2 An incomplete enumeration of recent articles would include Dwyer and Walker (1981); Frazier (1983a) (1983b); Frazier and Summers (1984); John (1984); Dwyer and Welsh (1985); Anderson and Narus (1984); Kale (1986); Dwyer, Schurr and Oh (1987); Heide and John (1988); and Frazier, Spekman and O'Neal (1988).
Researchers have commented on the need for research on troubled marketing channel relationships. In summarizing the aftermath of a marketing channel relationship termination, Dwyer, Schurr and Oh (1987) called for research into marketing channel relationship dissolution. Ping and Dwyer (1988) noted that knowledge of dissolution forces provides closure in channel research, and promises significant implications for channel management (p. 245).

After reporting the results of interviews with firms with troubled relationships, we will argue that the Rusbult et al. (1982) model applies in a channel context, then test this argument with a field survey and structural equation analysis of hardware retailers involving their relationship with their primary supplier.

We begin with a summary of related research that also introduces the study concepts.

Background

Economics

In the economics literature Hirschman (1970) proposed that exit (relationship termination) was one of several responses to exchange relationship problems. He argued that members or clients (customers) of person-organization dyads had three behavioral options when responding to organizational performance "lapses" or problems: they could exit the relationship, they could use voice, or they could do nothing and remain loyal. Exit was the individual's cessation of buying the firm's product(s), or leaving the organization. Voice involved remaining in the relationship and actively working with the relationship partner to remedy problems. Loyal behavior also involved remaining in the relationship but the loyal individual suffered in silence, with confidence that things would get better. Hirschman proposed that these exit, voice and loyalty responses depended on the level of overall relationship satisfaction, the attractiveness of an alternative relationship, and the switching costs associated with leaving the current relationship and establishing the alternative.

Social Psychology
The romantic relationships literature has also addressed responses to inter-person problems\(^3\). In a study of couples Rusbult et al. (1982) proposed that responses to problems included Hirschman's exit, voice and loyalty responses, and Farrell's (1983) neglect response. Neglect involved reducing contact with the relationship partner. Rusbult et al. also proposed that these general responses to problems depended upon, in addition to the Hirschman antecedents (satisfaction, alternative attractiveness, and switching cost), relationship investments: the time, effort and money spent to build and maintain the relationship.

Organizational Behavior

Similarly, the organizational behavior literature has addressed employee responses to employer-employee problems\(^4\). Rusbult, Farrell, Rogers, and Mainous (1988) argued that declined employee satisfaction lead to employee exit, voice, loyalty or neglect. In addition, they proposed and tested a model identical with Rusbult et al.'s (1982) romantic relationships model described above.

Marketing

The marketing channel literature has addressed interfirm relationship dissolution. Dwyer, Schurr and Oh (1987) argued that the process of buyer-seller relationship development consisted of awareness, exploration, expansion, commitment, and dissolution phases. In their description of the dissolution phase, they offered Duck's (1982) process model of interpersonal relationship dissolution as a framework for the process of interfirm relationship termination. Duck's model was comprised of four broad stages: intrapsychic, dyadic, social, and "grave dressing" stages.

---


\(^4\) This literature is also extensive and relevant articles include Mobley, Griffith, Hand and Meglino (1979); Porter, Steers, Mowday and Bouliaj (1974); Price (1977); and Rosse and Hulin (1985).
Offering a graph-based view of a marketing channel relationship, Ping and Dwyer (1988) argued that the perceptual distance between partner firm's role performance (Frazier 1983b) and the role performance available from an alternative firm, was positively associated with propensity to terminate.

Paralleling Johnson (1982), Ping (1990) noted that firms remained in a buyer-seller relationship because they either want to or have to. He proposed that satisfaction and the availability of alternative relationships interacted to affect buyer-seller propensity to terminate. Ping's laboratory results suggested that propensity to terminate was negatively affected by satisfaction and positively affected by the availability of alternatives, but the interaction of these variables was not significant.

The consumer satisfaction/dissatisfaction literature has addressed responses to consumer purchase dissatisfaction. Richins (1987) argued that the responses to consumer purchase dissatisfaction were complaints (see Singh and Howell 1985 for a review), negative word of mouth (Diener and Grayser 1978, Richins 1983), and brand switching (LaBarbra and Mazursky 1983). Although she did not cite Hirschman (1970), complaints and brand switching appeared remarkably similar to voice and exit. Singh (1990) has explicitly proposed exit and voice as responses to consumer purchase dissatisfaction.

The picture that emerges is that there are several general reactions to relationship problems: loyalty, voice, exit, and neglect. And, these responses are generally associated with satisfaction, alternative attractiveness, investments, and switching cost. In the following paragraphs we investigate these matters in a marketing channel context.

Responses to Channel Relationship Problems

In exploratory interviews with firms that were contemplating or had recently completed channel relationship terminations, we found hints of the responses to relationship problems just
discussed. These interviews involved suppliers, distributors, and retailers in an area surrounding a major metropolitan university. We contacted key informants responsible for "up-channel" or "down-channel" relationships with titles ranging from owner to purchasing manager.

The informants in the distributor and retailer group generally reported problems created either by the partner firm's actions, or their inaction. These problems prompted subject firm responses including ignoring the problem (loyalty), or complaining to the partner firm (voice). Chronic unsuccessful resolution of these problems may have reduced the subject firm's overall satisfaction, and produced opportunism, neglect or thoughts of exiting.

However, the informants reported that decisions regarding exiting were complex. While not consistently reported, lack of an attractive alternative, many relationship investments, and the high cost associated with switching to an alternative buyer-seller relationship appeared to make the exiting decision difficult. In addition, there were hints of these variables' associations with the other responses to relationship problems. For example, an attractive alternative, few relationship investments, and low switching cost also seemed to be associated with opportunism and neglect.

Encouraged by these anecdotal reports, the favorable model validation results in other dyads (Rusbult, et al. 1982; Rusbult, et al. 1988), and the channel political-economic arguments that "sentiments," such as overall satisfaction, should be associated with behaviors such as exiting⁵, we maintain that responses to channel relationship problems include exiting, voice, loyalty, opportunism, and neglect. In addition, satisfaction, and the structural constraint variables, alterna-

---

⁵ Stern and Reve (1980) proposed that a marketing channel can be viewed as an institution with internal and external economic and political structures and processes. Achrol, Reve and Stern (1983) argued that the political economy domains (external, internal, polity, and economy) were associated, and Dwyer and Oh (1987) among others have confirmed some of these associations. Stern and Reve proposed that sentiments and behaviors were associated, and specifically mentioned the link between satisfaction and exiting.
tive attractiveness, investments and switching cost, should be associated with these responses as shown in Figure 1.

Hypotheses

It is our contention that in channel relationships satisfaction and the structural constraint variables are associated with the responses to problems attributed to the relationship partner. Increases in the levels of the subject firm's overall satisfaction, investments and switching cost should make economic exchanges with its partner firm perceptually more valuable. As satisfaction, relationship investments, and switching cost increase, subject firms should respond positively to relationship problems by working with the partner firm (voice), or not rocking the boat (loyalty). In these circumstances, subject firms should be likely to be disinclined to exhibit relationship destructive (Rusbult et al. 1982) responses such as opportunism, reduced contact with the partner firm (neglect), or exiting because there is much to lose. Thus,

H1: Satisfaction, investments and switching cost are positively associated with loyalty and voice, and negatively associated with exiting, opportunism, and neglect.

Previous studies lend some support to these assertions. As we mentioned earlier Ping (1990) reported that satisfaction was negatively associated with exiting. Anderson (1988) reported that investments were negatively associated with opportunism for sales reps. In romantic relationships Rusbult et al. (1982) reported that prior (relationship) satisfaction and relationship investments were negatively associated with exiting and neglect, and positively associated with loyalty and voice.

The subject firms' perception of the attractiveness of the best alternative exchange relationship should have a different consequence. As the attractiveness of the alternative relationship increases, subject firms should be less likely to be passive (Rusbult et al. 1982) in the face of problems. Subject firms should actively respond to problems by confronting the incumbent
(voice), looking out for number one (being opportunistic), or exiting, and should be disinclined to respond passively by being loyal or neglectful. Hence,

H2: Alternative attractiveness is positively associated with voice, opportunism, and exiting, and negatively associated with loyalty and neglect.

There is also some empirical support for these statements. In the employment relationship literature Rusbult et al. (1988) reported that alternative quality was positively associated with exit and voice. Ping (1990) reported that alternative attractiveness was positively associated with exiting.

The balance of this paper presents the results of a test of these hypotheses.

Method

The test involved a field survey and a LISREL structural equation analysis to determine the associations among these concepts. We gathered data from hardware retailers concerning their loyalty to their primary supplier, and their voice, opportunism, neglect and exit propensity\textsuperscript{6} responses, along with their satisfaction with that supplier, the attractiveness of the best alternative supplier, relationship investments and perceived switching cost.

Sample Design

The study surveyed hardware retailers in the 50 U.S. states. The key informant within these sampling units was the store owner or executive. We randomly drew the sample of these informants from the subscription list for a hardware retailing industry publication that appeared to represent all the U.S. hardware retailers.

\textsuperscript{6} Because this study surveyed existing supplier relationships, we operationalized exit as the propensity to terminate the existing relationship.
The final test mailer sent to 600 names and addresses included a $2 response incentive and it, with two follow-up post card mailings, produced 288 responses (a 47% response rate; 9 questionnaires were returned as undeliverable). Two hundred and twenty two of these responses ultimately were deemed usable (incomplete cases were deleted). Table 1 profiles the final test responses.

Measures

The measurement of the study concepts used a combination of new and existing multi item Likert scales. For example satisfaction, the firm's global evaluation of relationship fulfillment (Dwyer and Oh 1987), was measured using a modification of the Dwyer and Oh (1987) satisfaction scale inspired by Gaski and Nevin (1985). Satisfaction's domain includes all relationship characteristics that the subject firm deems "rewarding, profitable, instrumental" (Rukert and Churchill 1984), or costly, unfair or frustrating. The satisfaction scale items addressed overall satisfaction, fairness, and a good company to do business with. Appendix A presents the final test versions of this and the other study measures.

Opportunism, self interest seeking with guile (Williamson 1975), was also measured using a modification of an existing scale: Dwyer and Oh's (1987) opportunism scale, that was derived from John's (1984) scale. John characterized the items in his scale as distortion of information, failure to fulfill promises, and a shirking of obligations. The scale items involved non-compliance when the relationship partner will not notice, not volunteering information, exaggeration/alteration of reports, and shirking.

New scales were developed for the other study measures. Alternative attractiveness, the subject firm's estimation of the satisfaction available in an alternative channel relationship, was operationalized as the perceived global evaluation of the additional relationship fulfillment available in the best alternative supplier relationship. Alternative attractiveness' conceptualization
encompasses the subject firm's generalized perceptions of the rewards, and costs available in the most salient alternative economic exchange relationship. The scale items concerned a good supplier company, their fairness, supplier products and services, their policies, and overall satisfaction with the supplier.

Investments, the costs the subject firm electively incurs to build and maintain the channel relationship in anticipation of future exchanges, were operationalized as the perceived magnitude of the relationship assets that would be lost or no longer useful if the relationship were terminated. Its conceptual domain involves sunk economic and opportunity costs such as money, time, and effort. The investment items dealt with overall relationship investments, investment uniqueness, and the time, effort and energy put into building and maintaining the exchange relationship.

Switching cost, the perceptions of the magnitude of the additional costs required to terminate the current channel relationship and secure the alternative, were operationalized as the perceived additional cost and effort to change suppliers. The domain of switching cost encompasses monetary expenses to end the current relationship and secure the alternative, and the psychic costs incurred in expenditures of time and effort. The switching cost scale items involved costs/spending time and money to switch suppliers, and losses in switching suppliers.

Because this study investigated existing buyer-seller relationships, we operationalized exiting, the subject firm physically leaving the relationship, as the propensity to terminate the current primary wholesaler-- the disinclination to continue the current relationship with the top full line wholesaler. The resulting items dealt with thinking of exiting, looking for a replacement relationship, considering a replacement, and the intention to exit.

We measured voice, the subject firm's active and constructive attempts to change conditions, as the intention to work directly with the partner firm to attempt to change conditions actively and constructively. Its domain includes seeking joint problem removal and relationship
maintenance, confronting the partner firm with problems in a positive way, and discussing and working cooperatively with the partner firm to improve the situation. The voice items addressed talking to partner, suggesting and discussing changes, and working with partner to solve mutual problems.

The study operationalized loyalty, abiding relationship problems in silence with confidence that things will get better, as the predisposition to live with the situation rather than confront the partner firm. The conceptual domain of loyalty involves viewing problems as transitory phenomena that correct themselves: they go away and are forgotten. Problems either work themselves out or the partner firm fixes them, so there is little reason to worry. The loyal firm either ignores problems or assumes they will go away, and concentrates on continuing with business as usual. Loyalty items addressed not mentioning problems, disregarding/overlooking/ignoring problems, and belief that problems fix themselves.

We measured neglect, reduced physical contact with the partner firm, as the intention to reduce physical contact with the principal wholesaler. Its conceptualization encompasses partially reduced physical contact, in which little effort is expended to maintain the relationship, and the relationship is a succession of discrete exchanges (Macneil 1980). In more extreme cases it includes ignoring the partner firm’s attempts to resolve problems, and just letting the exchange relationship deteriorate. The resulting neglect scale items dealt with letting the relationship deteriorate, taking no action to improve relations, not caring about partner, and letting the relationship die.

To develop the new measures we generated definitions of the concept domains guided by existing theorizing in the marketing channel, economics, romantic relationships, and employment relations literatures. Many items were developed from pre-survey interviews with hardware retailer key informants.
The resulting Likert scale items were evaluated by a jury of academicians, and then combined with the satisfaction and opportunism scales to produce a multipage questionnaire with five point balanced Likert scale items. We administered this questionnaire to a convenient group of hardware retailers, and then tested it in a pretest mailer.

Using the pretest responses we gauged the psychometric properties of the measures using item-total correlations, ordered similarity coefficients (Hunter 1973), apparent construct validity, and coefficient alpha calculations. The resulting measures were face valid, unidimensional, and internally/externally consistent\(^7\), and had coefficient alphas of .8 or above. Appendix A presents the final scale items.

When the final test responses were available we reexamined the psychometric properties of the measures before structural equation coefficient estimation using item-total correlations, ordered similarity coefficients, LISREL single factor analysis (Joreskog and Sorbom 1984), multiple group analysis (Anderson, Gerbing and Hunter 1987), and coefficient alpha calculations. Table 2 summarizes the psychographic properties of the final test scales.

Several measures required single item deletions to attain internal consistency (see Appendix A). The bases for dropping an item were an examination of construct validity, LISREL single factor analysis, normalized residuals, and multiple group analysis communalities. For example the study measured voice with items addressing talking to partner, suggesting and discussing changes, and working with partner to solve mutual problems. Before structural equation parameter estimation was accomplished the "will suggest changes . . ." item (item 1) was dropped.

\(^7\) Based on the ordered similarity coefficients (Hunter 1973) for the items (see Gerbing and Anderson 1988).
Similarly, loyalty items addressed not mentioning problems, disregarding/overlooking/ignoring problems, and belief that problems fix themselves. Item 5, "overlook problems . . .," was dropped for parameter estimation.

The opportunism measure was comprised of items dealing with non-compliance when the relationship partner will not notice, not volunteering information, exaggeration/alteration of reports, and shirking. An item involving "shirking" (item 5) was dropped.

We measured neglect with items dealing with letting the relationship deteriorate, taking no action to improve relations, not caring about partner, and letting the relationship die. A "not caring" item (item 2) was dropped before parameter estimation.

Items from the domain of alternative attractiveness concerned the alternative's being a good company, their fairness, products and services, policies, and estimated overall satisfaction. The fairness item (item 1) was dropped.

The items from the domain of switching cost dealt with costs/spending time and money to switch partners, and losses in switching partners. One of the spending time and money items (item 1) was deleted for parameter estimation.

The resulting measures were face valid, unidimensional, and internally and externally consistent. The coefficient alpha (Table 2), latent variable (Fornell and Larker 1981) reliabilities (Table 3), and the average variances extracted\(^8\) (Table 3) suggested that the measures are reliable. The average variances extracted also suggested discriminant validity\(^9\).

---

\(^8\) Fornell and Larker (1981) proposed that a latent variable's average variance extracted, which ranges between 0 and 1, measures the fraction of latent variable construct (non-error) variance. As a result, a latent variable's average variance extracted value of more than .5 suggests that the latent variable's measurement error variance is less than the variance due to the construct, and convergent validity (reliability) is indicated.

\(^9\) Fornell and Larker (1981) argued that discriminant validity for a pair of latent variables is suggested by average variance extracted values (Table 3) for each of these variables that are both larger than the squared standardized path coefficient between them (this coefficient is the squared correlation between these variables, which is given by the square of the relevant above diagonal value in the Table 3 covariance matrix).
Results

Specifying Figure 1 as a measurement model produced the measurement model results shown in Table 3. Although the traditional fit statistics (GFI and AGFI) for this measurement model were low, the number of normalized-residuals greater than 2 and the comparative fit index (Bentler 1990) suggested an acceptable measurement model specification.

We then specified the Figure 1 model as the structural model shown in Figure 2 and produced the maximum likelihood parameter estimates\(^{10}\) shown in Table 4.

The traditional fit statistics for this structural equation model were also low, but the normalized residual behavior and the comparative fit index statistics were acceptable (see Table 4).

Hypotheses Tests

Of the satisfaction, investments and switching cost hypothesis 1 associations, six were significant\(^{11}\) (see Table 4). Satisfaction's associations with exiting, voice, and neglect were significant and as hypothesized. In addition, investment's associations with voice and neglect were as hypothesized, as was switching cost's association with loyalty.

The hypothesis 2 alternative associations were also selectively significant. The alternative attractiveness-opportunism, and exiting associations were as hypothesized. The alternative-attractiveness-neglect association was significant but negative, rather than positive as hypothesized.

The observed results' consistency with prior research was mixed. Table 5 compares prior research results with the present study. For example the present study's significant satisfaction-exiting and alternative attractiveness-exiting associations were consistent with prior research, while

\(^{10}\) The Figure 2 structural equation model is an identified Type 1 model (Long 1983) so the identification proof is omitted.
the lack of an observed investments-exiting association was not. Similarly, the satisfaction-voice association in the present study was consistent with prior research, but the significant investments-voice association has not been consistently reported. The lack of a significant alternative attractiveness-voice association in the present study was also consistent with some prior research results but inconsistent with others. Similarly the satisfaction-neglect and investments-neglect results were consistent but the alternative attractiveness-neglect association and the loyalty results were not.

Discussion

These results prompt several observations. First, despite the selective support for the hypotheses, the model appears to apply to a channel context. Each exogenous variable was significantly associated with one or more endogenous variables. And, each endogenous variable was associated with one or more exogenous variables.

Second, as suggested above, several hypothesized associations were context sensitive. For example, alternatives was not associated with voice in romantic relationships, it positively affected voice in employment relationships, and was not associated with voice in this study. Similarly loyalty variously had alternatives and investment antecedents in studies in other contexts, but did not in this study's channel context. However, neglect was not associated with alternative attractiveness in other dyads, but the association was significant in this study.

Third, the model explained less variation in loyalty, voice and opportunism than in exiting and neglect. Table 4 shows the squared multiple correlations for exiting and neglect were .35 or above, but this value for voice and opportunism is .13 and .12, respectively, and .04 for loyalty. This suggests that there were unmodeled antecedents of these variables. Indeed, while plausible

---

11 Based on the traditional minimum critical ratio (t-statistic) of coefficient to standard error of 2.
reasons for the lack of explained variation in loyalty are not immediately obvious, Hirschman argued that the expectation of the success of voice and the advantage to be gained by voice affected voice (Hirschman 1970), and that voice itself was rewarding (Hirschman 1974). Hirschman (1970) also contended that industry characteristics (e.g., concentration, competition, or loose monopoly) affected exiting, voice and loyalty. Similarly, Bandura (1978) argued that the size of the gain to be realized and the expectation of success affected instrumental aggression, which may be related to opportunism. The exclusion of these plausible antecedents in the present study suggests opportunities for additional investigation exist.

Fourth, several disconfirmed associations are interesting. Exiting, for example, was not associated with investments or switching cost, contrary to Porter's (1980) and Thibaut and Kelly's (1959) predictions. A comparison between the significant Table 3 latent variable correlations between exiting and these two variables, and the structural model coefficients for these two relationships shown in Table 4, suggests these two relationships may be mis-specified. That is, exiting may actually affect investments and switching cost, rather than the other way around as specified in the Figure 2 model. Stated another way, as propensity to exit increased investments and switching cost may somehow have been perceptually discounted, and thereby reduced.

Similarly opportunism was not associated with investments or switching cost, contrary to expectations and Transaction Cost Analysis (Williamson 1975) predictions. Here misspecification may not account for the observed lack of a switching cost association because the measurement model switching cost-opportunism association was not significant. There may, however, be an unmodeled variable such as goal congruence (see Anderson 1988) that explains the variance in both switching cost and opportunism.

Returning to the lack of explained loyalty variance, while the alternative-loyalty and investments-loyalty associations appeared context sensitive (see Table 5), the satisfaction-loyalty
association has been consistently significant in previous studies. None of these associations were significant in the measurement model, and it is possible that this is a different type of misspecification. While it is not clear how, or even if, such relationships could be hypothesized, these variables may be non-linearly related to loyalty. Such non-linear associations would fail to produce significant measurement model or linear-terms-only structural equation coefficients.

Fifth, several confirmed and disconfirmed associations have management implications. For example satisfaction was significantly associated with exiting, voice, and neglect, and not associated with loyalty and opportunism. This supports the channel management maxim that satisfaction is necessary for relationship maintenance. In addition, while voice does not encompass all complaint behavior, in this study as satisfaction increased positive "complaining" did too. In other words some "complainers" were satisfied customers. This underscores the complexity of satisfaction in long term exchange relationships: an exchange partner may be dissatisfied with an individual event, yet still satisfied with the relationship overall. Hirschman (1970) hinted at both in referring to a firm's "repairable lapses" and deterioration of a firm's performance (p.1). Repairable lapses referred to negative evaluations of individual events: event dissatisfaction. Deterioration of performance referred to the overall evaluation of the performer or the relationship. Thibaut and Kelly (1959) also suggested this distinction between the evaluation of relationship events and the relationship itself in their focus on both the rewards/costs of an interaction, and the evaluation of the relationship (CL and CL_{Alt}). It is easy to speculate that event satisfactions built overall relationship satisfaction, which then increased buyer-seller relationship commitment (Dwyer, Schurr and Oh 1987), and thereby the satisfactory disposition of a voice built a buyer-seller relationship.

For channel managers neglect may spell trouble when it comes to gaining down-channel cooperation. In the interviews neglect produced relationships that were a succession of discrete
These relationships were characterized by, for example, ordering in writing not over the phone, and delegating contact to low level staff. In extreme cases neglect included dropping several product lines, ignoring the partner firm's attempts to resolve problems, and just letting the exchange relationship drift. In this study neglect was negatively associated with satisfaction and investments, and positively associated alternative attractiveness. Based on effect sizes, maintained satisfaction and reduced perceptions of alternative attractiveness were important for reduced neglect, and by implication increased potential for cooperation and coordination.

Returning to opportunism, it was associated only with alternative attractiveness: satisfaction, investments and switching cost did not affect opportunism. This suggests that the much hypothesized (Williamson 1975) effects of investments and switching cost on opportunism were either contextual or more complicated than originally proposed (e.g., involving goal congruence—see p. 17). However based on this study, the antecedents of opportunism included the opportunist's perception of alternative attractiveness: the alternative attractiveness-opportunism effect was among the largest in the study.

The study firms reported generally low levels of all reactions except voice. This suggests that as a group they preferred voice and working to improve relationship problems. It is tempting to speculate on the likelihood of favorable long term relationship impact of this apparent voice bias. The study's relatively satisfied subject firms sought opportunities to contact the supplier with problems (voice). Satisfactory resolution of these problems increased the likelihood of future contact, and satisfaction built. This upward satisfaction spiral, in turn, reduced neglect and exiting.

The satisfaction-exiting association was the largest in the study, and satisfaction, with alternative attractiveness, explained over half the variance in exiting. Increased satisfaction was therefore essential to reducing these firms exiting propensity. This was followed closely by the need for the supplier firm to differentiate itself and reduce the attractiveness of the subject firm's
alternative buyer-seller relationship. These results cast some doubt on the channel management maxim that the mobility barriers of investments and switching cost reduce a buyer firm's inclination to exit. The significant satisfaction and alternative attractiveness effects on exiting suggest that increased satisfaction and the relationship partner's decreased perception of attractive alternatives were the key to reduced exit inclination.

Limitations

As we have seen the Figure 2 model may have been somewhat mis-specified. The measurement model also showed significant interrelationships within both the exogenous and endogenous variables, but the structural model reflected these relationships only vaguely using correlations. While the effects of this lack of specification are uncertain, the study results should be considered preliminary and suggestive.
REFERENCES


<table>
<thead>
<tr>
<th>First Title Mentioned</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owner, partner</td>
<td>120</td>
</tr>
<tr>
<td>President</td>
<td>67</td>
</tr>
<tr>
<td>General Manager</td>
<td>6</td>
</tr>
<tr>
<td>Chief Financial Officer</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>18</td>
</tr>
<tr>
<td>Not reported</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>222</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reported Last Year's Sales</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;$10MM</td>
<td>5</td>
</tr>
<tr>
<td>$3-9.99MM</td>
<td>8</td>
</tr>
<tr>
<td>$1.2-2.99MM</td>
<td>28</td>
</tr>
<tr>
<td>$0.6-1.199MM</td>
<td>34</td>
</tr>
<tr>
<td>$0.25-0.599MM</td>
<td>47</td>
</tr>
<tr>
<td>$0.1-0.299MM</td>
<td>39</td>
</tr>
<tr>
<td>$.01-.099MM</td>
<td>22</td>
</tr>
<tr>
<td>$&lt;.01MM</td>
<td>0</td>
</tr>
<tr>
<td>Unreported</td>
<td>39</td>
</tr>
<tr>
<td>Total</td>
<td>222</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Years With Primary Wholesaler</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>19</td>
</tr>
<tr>
<td>3-5</td>
<td>54</td>
</tr>
<tr>
<td>6-10</td>
<td>51</td>
</tr>
<tr>
<td>11-20</td>
<td>57</td>
</tr>
<tr>
<td>21-30</td>
<td>21</td>
</tr>
<tr>
<td>31+</td>
<td>19</td>
</tr>
<tr>
<td>Unreported</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>222</td>
</tr>
</tbody>
</table>
Table 2

PSYCHOMETRIC PROPERTIES OF THE FINAL TEST SCALES

<table>
<thead>
<tr>
<th>Construct</th>
<th>Parameter</th>
<th>Final Test</th>
<th>Parameter Estimation</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>Items</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GFI</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AGFI</td>
<td>.98</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS Residual</td>
<td>.009</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td>.94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alternative</td>
<td>Items</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attractiveness</td>
<td>df</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GFI</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AGFI</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS Residual</td>
<td>.011</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td>.93</td>
<td></td>
<td>.92</td>
</tr>
<tr>
<td>Investments</td>
<td>Items</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>.003</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GFI</td>
<td>.97</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AGFI</td>
<td>.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS Residual</td>
<td>.021</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td>.91</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Switching Costs</td>
<td>Items</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>11</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>.038</td>
<td></td>
<td>.64</td>
</tr>
<tr>
<td></td>
<td>GFI</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AGFI</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS Residual</td>
<td>.004</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td>.94</td>
<td></td>
<td>.94</td>
</tr>
<tr>
<td>Loyalty</td>
<td>Items</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>53</td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0</td>
<td></td>
<td>.47</td>
</tr>
<tr>
<td></td>
<td>GFI</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AGFI</td>
<td>.99</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS Residual</td>
<td>.014</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td>.86</td>
<td></td>
<td>.81</td>
</tr>
</tbody>
</table>
Table 2 (Continued)

**PSYCHOMETRIC PROPERTIES OF THE FINAL TEST SCALES**

<table>
<thead>
<tr>
<th>Construct</th>
<th>Parameter*</th>
<th>Scale</th>
<th>Final Test</th>
<th>Parameter Estimation Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voice</td>
<td>Items</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>75</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0</td>
<td>.30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GFI</td>
<td></td>
<td>.99</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AGFI</td>
<td></td>
<td>.99</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS Residual</td>
<td></td>
<td>.007</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td>.91</td>
<td>.92</td>
<td></td>
</tr>
<tr>
<td>Opportunism</td>
<td>Items</td>
<td>6</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>10</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>84</td>
<td>8.72</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GFI</td>
<td></td>
<td>.98</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AGFI</td>
<td></td>
<td>.97</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS Residual</td>
<td></td>
<td>.015</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td>.86</td>
<td>.80</td>
<td></td>
</tr>
<tr>
<td>Neglect</td>
<td>Items</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>65</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0</td>
<td>.40</td>
<td></td>
</tr>
<tr>
<td></td>
<td>GFI</td>
<td></td>
<td>.99</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AGFI</td>
<td></td>
<td>.99</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS Residual</td>
<td></td>
<td>.008</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td>.92</td>
<td>.91</td>
<td></td>
</tr>
<tr>
<td>Exit</td>
<td>Items</td>
<td></td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>df</td>
<td>10</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>54</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>p-value</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GFI</td>
<td></td>
<td>.94</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AGFI</td>
<td></td>
<td>.89</td>
<td></td>
</tr>
<tr>
<td></td>
<td>RMS Residual</td>
<td></td>
<td>.020</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Alpha</td>
<td></td>
<td>.95</td>
<td></td>
</tr>
</tbody>
</table>

* Items = Number of items in the scale.

df = LISREL Chi-squared statistic degrees of freedom.
Chi-Squared = LISREL Chi-squared statistic value.
p-value = Attained significance of the LISREL chi-squared statistic.
GFI = LISREL goodness of fit index.
AGFI = LISREL adjusted goodness of fit index.
RMS Residual = LISREL root mean squared residual.
Alpha = Coefficient (Cronbach) alpha value.
### Table 3
MEASUREMENT MODEL RESULTS<sup>a</sup>

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Satisfaction</td>
<td>.82</td>
<td>-.56*</td>
<td>.35*</td>
<td>.26*</td>
<td>.01</td>
<td>.30*</td>
<td>-.21*</td>
<td>-.55*</td>
<td>-.67*</td>
</tr>
<tr>
<td>2. Alt. Attract.</td>
<td>-.48</td>
<td>.91</td>
<td>-.28*</td>
<td>-.40*</td>
<td>.04</td>
<td>-.09</td>
<td>.30*</td>
<td>.46*</td>
<td>.62*</td>
</tr>
<tr>
<td>3. Investments</td>
<td>.30</td>
<td>-.25</td>
<td>.86</td>
<td>.54*</td>
<td>-.04</td>
<td>.25*</td>
<td>-.17*</td>
<td>-.34*</td>
<td>-.27*</td>
</tr>
<tr>
<td>4. Switching Cost</td>
<td>.22</td>
<td>-.35</td>
<td>.46</td>
<td>.84</td>
<td>.10</td>
<td>.15*</td>
<td>-.05</td>
<td>-.26*</td>
<td>-.23*</td>
</tr>
<tr>
<td>5. Loyalty</td>
<td>.01</td>
<td>.04</td>
<td>-.03</td>
<td>.09</td>
<td>.85</td>
<td>-.31*</td>
<td>.31*</td>
<td>.12*</td>
<td>.04</td>
</tr>
<tr>
<td>6. Voice</td>
<td>.25</td>
<td>-.08</td>
<td>.22</td>
<td>.13</td>
<td>-.26</td>
<td>.84</td>
<td>-.28*</td>
<td>-.39*</td>
<td>-.25*</td>
</tr>
<tr>
<td>7. Opportunism</td>
<td>-.16</td>
<td>.24</td>
<td>-.13</td>
<td>-.04</td>
<td>.24</td>
<td>-.21</td>
<td>.69</td>
<td>.45*</td>
<td>.41*</td>
</tr>
<tr>
<td>8. Neglect</td>
<td>-.46</td>
<td>.41</td>
<td>-.29</td>
<td>-.22</td>
<td>.11</td>
<td>-.33</td>
<td>.35</td>
<td>.85</td>
<td>.70*</td>
</tr>
<tr>
<td>9. Exit</td>
<td>-.57</td>
<td>.56</td>
<td>-.23</td>
<td>-.20</td>
<td>.04</td>
<td>-.21</td>
<td>.32</td>
<td>.61</td>
<td>.87</td>
</tr>
<tr>
<td>Mean&lt;sup&gt;b&lt;/sup&gt;</td>
<td>4.16</td>
<td>2.54</td>
<td>3.73</td>
<td>3.25</td>
<td>2.36</td>
<td>4.09</td>
<td>2.24</td>
<td>1.85</td>
<td>2.13</td>
</tr>
<tr>
<td>Standard Deviation&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.67</td>
<td>.86</td>
<td>.75</td>
<td>.98</td>
<td>.71</td>
<td>.42</td>
<td>.61</td>
<td>.62</td>
<td>.84</td>
</tr>
</tbody>
</table>

**Fit Indices:**

- Chi-Squared Degrees of Freedom = 743
- Chi-Squared Statistic Value = 1562
- p-Value of Chi-Squared Value = .00
- Goodness of Fit Index = .79
- Adjusted Goodness of Fit Index = .74
- RMS Residual = .055
- Normalized Residuals greater than 2 = 40 (41 expected at 5%)
- Bentler (1990) Comparative Fit Index = .91

**Average Variance Extracted:**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Variance Extracted</td>
<td>.76</td>
<td>.76</td>
<td>.69</td>
<td>.80</td>
<td>.55</td>
<td>.75</td>
<td>.52</td>
<td>.73</td>
<td>.75</td>
</tr>
</tbody>
</table>

**Latent Variable Reliabilities:**

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latent Variable Reliabilities</td>
<td>.94</td>
<td>.92</td>
<td>.91</td>
<td>.91</td>
<td>.82</td>
<td>.92</td>
<td>.80</td>
<td>.91</td>
<td>.94</td>
</tr>
</tbody>
</table>

* t-value greater than 2.
<sup>a</sup> Covariances on and below the diagonal, correlations above.
<sup>b</sup> Using summed indicants.
Table 4  
STRUCTURAL EQUATION MODEL RESULTS 

<table>
<thead>
<tr>
<th>Structural Equations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loyalty ($\eta_1$) = $\gamma_{11}$SAT($\xi_1$) + $\gamma_{21}$ALT($\xi_2$) + $\gamma_{31}$INVEST($\xi_3$) + $\gamma_{41}$SWITCH($\xi_4$) + $\zeta_1$</td>
</tr>
<tr>
<td>Voice ($\eta_2$) = $\gamma_{12}$SAT($\xi_1$) + $\gamma_{22}$ALT($\xi_2$) + $\gamma_{32}$INVEST($\xi_3$) + $\gamma_{42}$SWITCH($\xi_4$) + $\zeta_2$</td>
</tr>
<tr>
<td>Opportunity ($\eta_3$) = $\gamma_{13}$SAT($\xi_1$) + $\gamma_{23}$ALT($\xi_2$) + $\gamma_{33}$INVEST($\xi_3$) + $\gamma_{43}$SWITCH($\xi_4$) + $\zeta_3$</td>
</tr>
<tr>
<td>Neglect ($\eta_4$) = $\gamma_{14}$SAT($\xi_1$) + $\gamma_{24}$ALT($\xi_2$) + $\gamma_{34}$INVEST($\xi_3$) + $\gamma_{44}$SWITCH($\xi_4$) + $\zeta_4$</td>
</tr>
<tr>
<td>Exit ($\eta_5$) = $\gamma_{15}$SAT($\xi_1$) + $\gamma_{25}$ALT($\xi_2$) + $\gamma_{35}$INVEST($\xi_3$) + $\gamma_{45}$SWITCH($\xi_4$) + $\zeta_5$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Coefficient</th>
<th>T-value</th>
<th>Parameter</th>
<th>Coefficient</th>
<th>T-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\gamma_{11}$</td>
<td>.09</td>
<td>1.14</td>
<td>$\epsilon_{14}$</td>
<td>.69</td>
<td>11.25</td>
</tr>
<tr>
<td>$\gamma_{12}$</td>
<td>.31</td>
<td>4.03</td>
<td>$\epsilon_{21}$</td>
<td>.30</td>
<td>9.81</td>
</tr>
<tr>
<td>$\gamma_{13}$</td>
<td>-.02</td>
<td>-.32</td>
<td>$\epsilon_{23}$</td>
<td>.16</td>
<td>7.21</td>
</tr>
<tr>
<td>$\gamma_{14}$</td>
<td>-.38</td>
<td>-5.60</td>
<td>$\epsilon_{24}$</td>
<td>.31</td>
<td>9.96</td>
</tr>
<tr>
<td>$\gamma_{15}$</td>
<td>-.47</td>
<td>-8.08</td>
<td>$\epsilon_{25}$</td>
<td>.19</td>
<td>8.06</td>
</tr>
<tr>
<td>$\gamma_{21}$</td>
<td>.15</td>
<td>1.80</td>
<td>$\epsilon_{31}$</td>
<td>.83</td>
<td>11.43</td>
</tr>
<tr>
<td>$\gamma_{22}$</td>
<td>.15</td>
<td>1.92</td>
<td>$\epsilon_{32}$</td>
<td>.75</td>
<td>11.20</td>
</tr>
<tr>
<td>$\gamma_{23}$</td>
<td>.31</td>
<td>3.74</td>
<td>$\epsilon_{33}$</td>
<td>.30</td>
<td>7.34</td>
</tr>
<tr>
<td>$\gamma_{24}$</td>
<td>.21</td>
<td>3.05</td>
<td>$\epsilon_{34}$</td>
<td>.32</td>
<td>7.63</td>
</tr>
<tr>
<td>$\gamma_{25}$</td>
<td>.37</td>
<td>6.46</td>
<td>$\epsilon_{36}$</td>
<td>.47</td>
<td>9.74</td>
</tr>
<tr>
<td>$\gamma_{31}$</td>
<td>-.15</td>
<td>-1.87</td>
<td>$\epsilon_{41}$</td>
<td>.42</td>
<td>10.71</td>
</tr>
<tr>
<td>$\gamma_{32}$</td>
<td>.17</td>
<td>2.28</td>
<td>$\epsilon_{42}$</td>
<td>.28</td>
<td>9.76</td>
</tr>
<tr>
<td>$\gamma_{33}$</td>
<td>-.15</td>
<td>-1.96</td>
<td>$\epsilon_{43}$</td>
<td>.13</td>
<td>6.72</td>
</tr>
<tr>
<td>$\gamma_{34}$</td>
<td>-.14</td>
<td>-2.08</td>
<td>$\epsilon_{44}$</td>
<td>.27</td>
<td>8.64</td>
</tr>
<tr>
<td>$\gamma_{35}$</td>
<td>-.02</td>
<td>-.41</td>
<td>$\epsilon_{45}$</td>
<td>.47</td>
<td>11.32</td>
</tr>
<tr>
<td>$\gamma_{41}$</td>
<td>.23</td>
<td>2.88</td>
<td>$\epsilon_{51}$</td>
<td>.24</td>
<td>10.46</td>
</tr>
<tr>
<td>$\gamma_{42}$</td>
<td>.04</td>
<td>.59</td>
<td>$\epsilon_{52}$</td>
<td>.12</td>
<td>8.65</td>
</tr>
<tr>
<td>$\gamma_{43}$</td>
<td>.15</td>
<td>1.89</td>
<td>$\epsilon_{53}$</td>
<td>.31</td>
<td>10.87</td>
</tr>
<tr>
<td>$\gamma_{44}$</td>
<td>.00</td>
<td>.06</td>
<td>$\epsilon_{54}$</td>
<td>.12</td>
<td>8.77</td>
</tr>
<tr>
<td>$\gamma_{45}$</td>
<td>.06</td>
<td>1.05</td>
<td>$\epsilon_{55}$</td>
<td>.16</td>
<td>9.50</td>
</tr>
<tr>
<td>$\delta_{11}$</td>
<td>.34</td>
<td>10.59</td>
<td>$\lambda_{x11}$</td>
<td>.89</td>
<td>18.82</td>
</tr>
<tr>
<td>$\delta_{12}$</td>
<td>.24</td>
<td>9.77</td>
<td>$\lambda_{x12}$</td>
<td>.96</td>
<td>22.06</td>
</tr>
<tr>
<td>$\delta_{13}$</td>
<td>.17</td>
<td>8.73</td>
<td>$\lambda_{x13}$</td>
<td>1.00</td>
<td>0.00*</td>
</tr>
<tr>
<td>$\delta_{14}$</td>
<td>.23</td>
<td>9.72</td>
<td>$\lambda_{x14}$</td>
<td>.96</td>
<td>22.23</td>
</tr>
<tr>
<td>$\delta_{15}$</td>
<td>.17</td>
<td>8.85</td>
<td>$\lambda_{x15}$</td>
<td>.99</td>
<td>24.27</td>
</tr>
<tr>
<td>$\delta_{22}$</td>
<td>.27</td>
<td>9.95</td>
<td>$\lambda_{x22}$</td>
<td>.89</td>
<td>22.76</td>
</tr>
<tr>
<td>$\delta_{23}$</td>
<td>.26</td>
<td>9.86</td>
<td>$\lambda_{x23}$</td>
<td>.89</td>
<td>23.11</td>
</tr>
<tr>
<td>$\delta_{24}$</td>
<td>.08</td>
<td>5.08</td>
<td>$\lambda_{x24}$</td>
<td>1.00</td>
<td>0.00*</td>
</tr>
<tr>
<td>$\delta_{25}$</td>
<td>.31</td>
<td>10.31</td>
<td>$\lambda_{x25}$</td>
<td>.86</td>
<td>21.18</td>
</tr>
<tr>
<td>$\delta_{31}$</td>
<td>.48</td>
<td>11.11</td>
<td>$\lambda_{x31}$</td>
<td>.77</td>
<td>15.37</td>
</tr>
<tr>
<td>$\delta_{32}$</td>
<td>.17</td>
<td>8.62</td>
<td>$\lambda_{x32}$</td>
<td>.97</td>
<td>25.51</td>
</tr>
<tr>
<td>$\delta_{33}$</td>
<td>.14</td>
<td>7.60</td>
<td>$\lambda_{x33}$</td>
<td>1.00</td>
<td>0.00*</td>
</tr>
<tr>
<td>$\delta_{34}$</td>
<td>.16</td>
<td>8.30</td>
<td>$\lambda_{x34}$</td>
<td>.98</td>
<td>26.08</td>
</tr>
<tr>
<td>$\delta_{35}$</td>
<td>.56</td>
<td>11.31</td>
<td>$\lambda_{x35}$</td>
<td>.70</td>
<td>13.27</td>
</tr>
<tr>
<td>$\delta_{42}$</td>
<td>.26</td>
<td>9.93</td>
<td>$\lambda_{x42}$</td>
<td>.93</td>
<td>21.29</td>
</tr>
<tr>
<td>$\delta_{43}$</td>
<td>.18</td>
<td>8.71</td>
<td>$\lambda_{x43}$</td>
<td>.98</td>
<td>24.36</td>
</tr>
<tr>
<td>$\delta_{44}$</td>
<td>.16</td>
<td>8.09</td>
<td>$\lambda_{x44}$</td>
<td>1.00</td>
<td>0.00*</td>
</tr>
<tr>
<td>$\delta_{45}$</td>
<td>.17</td>
<td>8.58</td>
<td>$\lambda_{x45}$</td>
<td>.98</td>
<td>24.59</td>
</tr>
<tr>
<td>$\epsilon_{11}$</td>
<td>.31</td>
<td>7.78</td>
<td>$\lambda_{y11}$</td>
<td>.88</td>
<td>16.01</td>
</tr>
<tr>
<td>$\epsilon_{12}$</td>
<td>.12</td>
<td>3.02</td>
<td>$\lambda_{y12}$</td>
<td>1.00</td>
<td>0.00*</td>
</tr>
<tr>
<td>$\epsilon_{13}$</td>
<td>.66</td>
<td>11.17</td>
<td>$\lambda_{y13}$</td>
<td>.61</td>
<td>10.22</td>
</tr>
</tbody>
</table>
Table 4 (Continued)

STRUCTURAL EQUATION MODEL RESULTS

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Coefficient Estimate</th>
<th>T-value</th>
<th>Parameter</th>
<th>Coefficient Estimate</th>
<th>T-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\lambda_{y14}$</td>
<td>.59</td>
<td>9.77</td>
<td>$\zeta_4$</td>
<td>.55</td>
<td>9.58</td>
</tr>
<tr>
<td>$\lambda_{y22}$</td>
<td>.91</td>
<td>19.90</td>
<td>$\zeta_5$</td>
<td>.39</td>
<td>9.61</td>
</tr>
<tr>
<td>$\lambda_{y23}$</td>
<td>1.00</td>
<td>0.00*</td>
<td>$\psi_{12}$</td>
<td>-.27</td>
<td>-5.03</td>
</tr>
<tr>
<td>$\lambda_{y24}$</td>
<td>.90</td>
<td>19.41</td>
<td>$\psi_{13}$</td>
<td>.21</td>
<td>4.17</td>
</tr>
<tr>
<td>$\lambda_{y25}$</td>
<td>.98</td>
<td>23.32</td>
<td>$\psi_{14}$</td>
<td>.10</td>
<td>2.29</td>
</tr>
<tr>
<td>$\lambda_{y31}$</td>
<td>.49</td>
<td>6.62</td>
<td>$\psi_{15}$</td>
<td>.03</td>
<td>.77</td>
</tr>
<tr>
<td>$\lambda_{y32}$</td>
<td>.59</td>
<td>8.17</td>
<td>$\psi_{23}$</td>
<td>-.16</td>
<td>-3.56</td>
</tr>
<tr>
<td>$\lambda_{y33}$</td>
<td>1.00</td>
<td>0.00*</td>
<td>$\psi_{24}$</td>
<td>-.18</td>
<td>-4.23</td>
</tr>
<tr>
<td>$\lambda_{y34}$</td>
<td>.98</td>
<td>14.39</td>
<td>$\psi_{25}$</td>
<td>-.06</td>
<td>-1.67</td>
</tr>
<tr>
<td>$\lambda_{y36}$</td>
<td>.86</td>
<td>12.53</td>
<td>$\psi_{34}$</td>
<td>.22</td>
<td>5.12</td>
</tr>
<tr>
<td>$\lambda_{y41}$</td>
<td>.81</td>
<td>16.77</td>
<td>$\psi_{35}$</td>
<td>.15</td>
<td>4.22</td>
</tr>
<tr>
<td>$\lambda_{y43}$</td>
<td>.91</td>
<td>20.81</td>
<td>$\psi_{45}$</td>
<td>.24</td>
<td>6.74</td>
</tr>
<tr>
<td>$\lambda_{y44}$</td>
<td>1.00</td>
<td>0.00*</td>
<td>$\phi_{11}$</td>
<td>.82</td>
<td>9.78</td>
</tr>
<tr>
<td>$\lambda_{y45}$</td>
<td>.95</td>
<td>23.39</td>
<td>$\phi_{12}$</td>
<td>-.48</td>
<td>-7.64</td>
</tr>
<tr>
<td>$\lambda_{y51}$</td>
<td>.77</td>
<td>16.03</td>
<td>$\phi_{13}$</td>
<td>.30</td>
<td>5.31</td>
</tr>
<tr>
<td>$\lambda_{y52}$</td>
<td>.92</td>
<td>23.77</td>
<td>$\phi_{14}$</td>
<td>.22</td>
<td>4.04</td>
</tr>
<tr>
<td>$\lambda_{y53}$</td>
<td>1.00</td>
<td>0.00*</td>
<td>$\phi_{22}$</td>
<td>.91</td>
<td>10.63</td>
</tr>
<tr>
<td>$\lambda_{y54}$</td>
<td>.88</td>
<td>20.89</td>
<td>$\phi_{23}$</td>
<td>-.25</td>
<td>-4.43</td>
</tr>
<tr>
<td>$\lambda_{y55}$</td>
<td>.99</td>
<td>30.01</td>
<td>$\phi_{24}$</td>
<td>-.35</td>
<td>-5.90</td>
</tr>
<tr>
<td>$\lambda_{y56}$</td>
<td>.97</td>
<td>28.02</td>
<td>$\phi_{33}$</td>
<td>.86</td>
<td>10.11</td>
</tr>
<tr>
<td>$\zeta_1$</td>
<td>.84</td>
<td>9.40</td>
<td>$\phi_{34}$</td>
<td>.46</td>
<td>7.43</td>
</tr>
<tr>
<td>$\zeta_2$</td>
<td>.72</td>
<td>9.67</td>
<td>$\phi_{44}$</td>
<td>.84</td>
<td>9.90</td>
</tr>
<tr>
<td>$\zeta_3$</td>
<td>.61</td>
<td>7.84</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fit Indices

Chi-Squared Degrees of Freedom = 743
Chi-Squared Statistic Value = 1562
p-Value of Chi-Squared Value = 0
Goodness of Fit Index = .79
Adjusted Goodness of Fit Index = .74
RMS Residual = .055
Normalized Residuals greater than 2 = 38 (41 expected at 5%)
Bentler (1990) Comparative Fit Index = .91
Total Coefficient of Determination for Structural Equations = .64

Squared Multiple Correlations

<table>
<thead>
<tr>
<th>Variables</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Squared Multiple Correlations</td>
<td>.04</td>
<td>.13</td>
<td>.12</td>
<td>.35</td>
<td>.55</td>
</tr>
</tbody>
</table>

* = Parameter fixed

SAT = Satisfaction, SWITCH = Switching Cost, ALT = Alt. Attractiveness, INVEST = Investments, OPPORT = Opportunism.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sat-Exi(^c)</td>
<td>-(^d)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Alt-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Inv-</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Swi-</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Sat-Voi</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Alt-</td>
<td>ns</td>
<td>ns</td>
<td>+</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
</tr>
<tr>
<td>Inv-</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Swi-</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Sat-Loy</td>
<td>ns</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Alt-</td>
<td>ns</td>
<td>ns</td>
<td>+</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
</tr>
<tr>
<td>Inv-</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
</tr>
<tr>
<td>Swi-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
</tr>
<tr>
<td>Sat-Neg</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Alt-</td>
<td>+</td>
<td>+</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
</tr>
<tr>
<td>Inv-</td>
<td>-</td>
<td>-</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Swi-</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Sat-Opp</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Alt-</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
<td>+ ns</td>
</tr>
<tr>
<td>Inv-</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Swi-</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
<td>ns</td>
</tr>
</tbody>
</table>

\(^a\) Provan and Skinner (1989).
\(^b\) Schultz, Bigoness and Gagnon (1987).
\(^d\) - = Significant negative association, + = Significant positive association, ns = Not significant.
Figure 1

A MODEL OF THE GENERAL RESPONSES TO PROBLEMS IN CHANNEL RELATIONSHIPS AND THEIR ANTECEDENTS
Figure 2

STRUCTURAL EQUATION MODEL

See Table 4 for ξ's and η's.

φ_{ij} is the correlation between ξ_i and ξ_j.

γ_{ij} is the effect of ξ_i on η_j.

ψ_{ij} is the correlation between ζ_i and ζ_j.
APPENDIX
FINAL TEST SCALE ITEMS

SATISFACTION

1. All in all, my primary wholesaler is very fair with me.
2. Overall, my primary wholesaler is a good company to do business with.
3. In general am pretty satisfied with my relationship with my primary wholesaler.
4. Overall, my primary wholesaler treats me very fairly.
5. All in all, my relationship with my primary wholesaler is very satisfactory.

SWITCHING COSTS

*1. On the whole, I would spend a lot of time and money to change primary wholesalers.
2. All things considered, the company would lose a lot in changing primary wholesalers.
3. Generally speaking, the costs in time, money, effort and grief to switch primary wholesalers would be high.
4. Overall, I would spend a lot and lose a lot if I changed primary wholesalers.
5. Considering everything, the costs to stop doing business with the current wholesaler and start up with the alternative wholesaler would be high.

NEGLECT

1. I won't plan to do anything to improve relations with my primary wholesaler and will expect things will become worse.
*2. At times I care very little about what happens to my primary wholesaler as long as I get what I need from them.
3. I have quit caring about my primary wholesaler and will let conditions get worse and worse.
4. I will passively let the relationship with my primary wholesaler slowly deteriorate.
5. If things are not right with my primary wholesaler I sometimes consider letting the relationship die a slow death.

*Item deleted for coefficient estimation.
APPENDIX (Continued)
FINAL TEST SCALE ITEMS

ALTERNATIVE ATTRACTIVENESS

*1. All in all, the alternative wholesaler would be ______ fair than/as the current wholesaler is. (Circle a letter)
   a. Much more  b. Slightly more  c. As  d. Slightly less  e. Much less
2. Overall, the alternative wholesaler's policies would benefit my company than/as the current wholesaler's policies. (Circle a letter)
   a. Much more  b. Slightly more  c. As much  d. Slightly less  e. Much less
3. I would be _____ satisfied with the product and service available from the alternative wholesaler than/as the product and service provided by the current wholesaler. (Circle a letter)
   a. Much more  b. Slightly more  c. As  d. Slightly less  e. Much less
4. In general, I would be _____ satisfied with the alternative wholesaler than/as I am with the current wholesaler. (Circle a letter)
   a. Much more  b. Slightly more  c. As  d. Slightly less  e. Much less
5. Overall, the alternative wholesaler would be a/an _____ company to do business with than/as the current wholesaler. (Circle a letter)
   a. Much better  b. Slightly better  c. As good a  d. Slightly worse  e. Much worse

INVESTMENTS

1. Overall I have invested a lot in the relationship with the current wholesaler.
2. A lot of energy, time and effort have gone into building and maintaining the relationship with the current wholesaler.
3. All things considered the company has put a lot into the relationship with the current wholesaler.
4. I have put a considerable amount of time, effort and energy into building the relationship with the current wholesaler.
5. Much of my investment with the current wholesaler is unique to the relationship.

LOYALTY

1. I will not say anything to my primary wholesaler about mutual problems because they seem to go away by themselves.
2. I disregard problems with my primary wholesaler because they just seem to work themselves out.
3. Problems with my primary wholesaler will often fix themselves.
4. Sometimes I ignore problems with my primary wholesaler.
*5. I often overlook problems with my primary wholesaler because they frequently fix themselves.
*Item deleted for coefficient estimation.
EXIT

1. Occasionally I will think about ending the business relationship with my primary wholesaler.
2. I am not likely to continue the business relationship with my primary wholesaler.
3. I will probably consider a replacement primary wholesaler in the near future.
4. I am looking at replacement wholesalers.
5. I will consider a replacement wholesaler soon.
6. I will probably stop doing business with my primary wholesaler in the near future.

VOICE

*1. Occasionally I will suggest changes to my primary wholesaler if there is a mutual problem.
2. If there are problems with my primary wholesaler I will work jointly with them to help improve the situation.
3. I will work with my primary wholesaler to correct any mutual problems.
4. I will try to discuss any primary wholesaler related problems with them.
5. I will cooperatively discuss mutual problems with my primary wholesaler.

OPPORTUNISM

1. I will not volunteer much information regarding my business to my primary wholesaler.
2. There will be some things I will do only if my primary wholesaler checks up and insists on it.
3. Sometimes, I will have to alter the facts slightly in order to get what I need from my primary wholesaler.
4. I may purposefully exaggerate the sales opportunities in my market in order to get additional allowances or assistance from my primary wholesaler.
*5. Occasionally I may shrink certain contractual obligations to my primary wholesaler when I see profit opportunities from doing so.
6. I may neglect my program responsibilities when my primary wholesaler is not likely to notice my noncompliance.

*Item deleted for coefficient estimation.
executive summary

because we know little empirically of the relationships between affects such as satisfaction and behavioral intentions such as exiting in marketing channel relationships, this article reports the results of a field survey of the associations between hardware retailers' satisfaction and their response intentions to channel relationship problems. the objective was to determine the relationships between the response intention variables, exiting (intention to terminate the buyer-seller relationship), voice (actively work with the relationship partner to remedy the problem), loyalty (suffer problems in silence with confidence that things will get better), opportunism (seek self interest with guile), and neglect (reduce contact with the buyer-seller relationship partner), and their antecedents, satisfaction, and the "structural constraints" (johnson 1982) of alternative attractiveness, investments and switching cost, using structural equation analysis.

the study introduces concepts such as neglect into the marketing literature, and tested a model from the social psychological literature due to rusbult, zembrodt and gunn (1982) in a channel context. in addition it provided hints of the dynamics operating within the committed and dissolution phases of dwyer, schurr and oh's (1987) buyer-seller relationship development framework, and generalized ping's (1990) model of marketing channel relationship termination to a more comprehensive view of interfirm response intentions to relationship problems.

the results provided selective support for the hypotheses and the rusbult et al. model, and the model appeared to apply to a channel context.

findings included that several hypothesized associations were context sensitive. for example investments and switching cost were not associated with exiting, contrary to porter (1980) and thibaut and kelly's (1959) predictions. in the discussion the authors proposed that
the effect may be the other way around-- exiting may affect investments and switching cost. Similarly, investments and switching cost were not associated with opportunism, contrary to Transaction Cost analysis (Williamson 1975) arguments.

While the study supplies no direct evidence, the discussion of the results also proposed two types of satisfaction in long term buyer-seller relationships: event satisfaction and overall relationship satisfaction. Previously hinted at by other authors, event satisfaction or dissatisfaction was argued to proceed from the evaluation of a relationship event, while overall relationship satisfaction was the overall evaluation of the buyer-seller relationship. The study results suggested the retailers could be dissatisfied with an event yet satisfied overall.

The results also suggested that the effectiveness of increased mobility barriers (Levinger 1979) such as investments and switching cost in decreasing exiting was situationally dependent. In this study maintaining satisfaction and decreasing the perception of the retailers' alternative attractiveness were more appropriate for reducing exiting.

Similarly, maintaining satisfaction and reducing alternative attractiveness appeared to be more effective in reducing neglect than increasing switching cost, which had no effect on neglect, or increasing investments, which had a small effect on neglect.

The survey firms reported low levels of all reactions except voice. This suggested as a group they preferred working to improve relationship problems to the more passive (Rusbult et al. 1982) loyalty reaction, or negative (Rusbult et al. 1982) reactions such as opportunism, neglect or exit.